

Learning What Works for School-Based Dental Health Programs

THE OREGON CHILDREN'S DENTAL HEALTH INITIATIVE



MAY 2019

Madeline Brandt, Research Officer, Oregon Community Foundation

Kimberly Leonard, Senior Research Officer, Oregon Community Foundation

Special thanks to:

- The Initiative-funded school-based dental health program leaders, staff, partners and volunteers who have taught us so much about their work.
- The Oregon Health Authority's Oral Health Unit staff for answering many questions and sharing preliminary data to provide context for the work of the Initiative-funded programs.
- The Oregon Children's Dental Health Initiative funding partners for supporting this work and advocating for improved children's dental health in Oregon.
- All of the organizations and individuals who provided insight and feedback on this report.

For more information about this report, please contact Kimberly Leonard at (503) 227-6846 or kleonard@oregoncf.org.

RECOMMENDED CITATION

Brandt, M. & Leonard, K. (2019). *Learning what works for school-based dental health programs*. Portland, OR: Oregon Community Foundation.

ABOUT THIS REPORT

This report describes how the 15 school-based dental health programs funded through the Oregon Children's Dental Health Initiative operate, their accomplishments, and what it takes to support this work in communities. This report fills a gap in existing information about the valuable role of school-based dental health programs and the details of how these programs work. This information should support a thorough understanding about these programs and the role they play in continued efforts to improve children's dental health in Oregon. An executive summary of this report is available separately upon request.



TABLE OF CONTENTS

<p>2 Introduction</p>	<p>Program coordination is critical to the success of service delivery</p>
<p>6 Childhood Tooth Decay Remains Far Too Common in Oregon</p>	<p>Programs share seven core principles for coordination while adapting to local needs and resources</p>
<p>10 School-Based Dental Health Programs are an Effective and Evidence-Based Approach to Improving Oral Health</p>	<p>31 Case Studies</p>
<p>14 The Oregon Children’s Dental Health Initiative Increased Support For and Access to School-Based Dental Health Programs</p> <p>The Oregon Children’s Dental Health Initiative expanded the reach of school-based dental health programs</p> <p>What it costs to run these programs varies depending on reach and context</p>	<p>52 Recommendations and Next Steps</p> <p>55 Map of Programs</p> <p>56 Table of Programs</p> <p>57 Glossary</p> <p>59 References</p>

“Almost a third of children [with] a history of dental caries also have dental pain. Any other preventable pain that affects almost a third of any social group would be subject to multiple studies. Unfortunately, dental pain is considered by many a common occurrence and less likely to be studied than other, less prevalent health conditions... it is probable that many children learn to live with pain, taking pain as part of their normal lives, similar to the perception of dental pain in the earlier centuries.”

DR. CLEMENCIA VARGAS, PUBLIC HEALTH DENTIST¹

TOOTH DECAY, CARIES AND CAVITIES

These terms are often used interchangeably to denote missing tooth structure due to decay, erosion or abrasion. The lay term is tooth decay, or simply “decay.”

ABSCCESS

Acute or chronic localized inflammation, probably with a collection of pus, associated with tissue destruction and, frequently, swelling; usually secondary to infection.

SOCIAL DETERMINANTS OF HEALTH

The conditions in which people live, work and play. These factors affect a wide range of health risks and outcomes.

Healthy teeth are essential for healthy development and overall well-being. Tooth decay is so common in the United States that it may seem like a normal part of childhood. But untreated tooth decay can have serious and even life-threatening complications, including pain and swelling, tooth abscesses, damaged or broken teeth, and increased susceptibility to other infections.² Untreated tooth decay can inhibit a child’s ability to speak, learn and grow. Children with poor oral health miss more school days and receive lower grades than their peers with healthier teeth.³

Complications of childhood tooth decay, which can last well into adulthood, include increased risk of decay in permanent teeth and heightened risk of other serious health conditions such as diabetes and heart disease.

The social determinants of health play a major role in the prevalence of tooth decay. Children’s health is shaped by the economic, environmental and social conditions in which they live, learn and play. These factors directly impact lifelong achievement, health and economic stability. Oral health status is tied to educational attainment and economic success, safety and stability of housing and neighborhoods, quality of schools, and exposure to trauma.⁴

Low-income children and children of color experience disproportionate rates of tooth decay and are less likely to receive the care they need.

The burden of oral disease falls most heavily on historically underserved communities, particularly those in low income families, those who live in rural areas, and communities of color. There are many reasons that children go without dental care, including systemic barriers like geographic isolation, cost,

A comparison of Medicaid reimbursement for tooth decay-related dental problems found that the cost to manage symptoms in an emergency room is approximately ten times the cost of preventive care in a dental office.

SOURCE: MMWR Morb Mortal Wkly Rep. (October 2016). Decay Among UNITED STATES School-Aged Children. Retrieved from <http://dx.doi.org/10.15585/mmwr.mm6541e1org/10.15585/mmwr.mm6541e1>

Over the course of a year, a school-based sealant program serving 1,000 children will prevent an estimated 133 toothaches and avert the need for 485 fillings.

SOURCE: MMWR Morb Mortal Wkly Rep. (October 2016). Decay Among UNITED STATES School-Aged Children. Retrieved from <http://dx.doi.org/10.15585/mmwr.mm6541e1>

and lack of transportation. Children living in low-income households are twice as likely to have untreated tooth decay as their higher-income peers and are far less likely to see a dentist.⁵ Children of color are half as likely as white children to receive necessary dental treatment.⁶

If children are unable to receive the preventive or early dental care they need, treatment may be postponed until symptoms become severe and necessitate a visit to the emergency room. This can be painful and costly, and often does not resolve the underlying health problem. The treatment received in emergency rooms is usually limited to infection and pain management; children typically still need to see a dentist for restorative care (e.g., fillings). According to a 2014 estimate, the cost of treating nontraumatic dental problems for children and adults in Oregon's emergency rooms is \$8 million per year.⁷

School-based dental health programs are an evidence-based, effective, and inexpensive approach to improving children's dental health and promoting health equity. School-based dental health programs provide dental screenings, sealants, fluoride and oral health education. These programs reduce dental pain and suffering and are a highly effective way to reduce states' oral health costs, resulting in cost savings to Medicaid and society within two years.⁸ School-based dental health programs targeting children at high risk of tooth decay become cost-neutral or cost-saving even more quickly.⁹ A single \$53 sealant can reduce decay in permanent molars by 80 percent in the first two years after application,¹⁰ and cost savings can be as high as \$487 per averted cavity.¹¹

SCHOOL-BASED DENTAL HEALTH PROGRAMS

Programs in which teams of dental health professionals deliver screenings and services using portable equipment within a school, school-based clinic, or mobile dental van on school property.

HEALTH EQUITY

Ensuring equal opportunity for health by removing barriers that prevent individuals and communities from reaching their full potential.

DENTAL SCREENING

A quick assessment of a child's dental health. A dental professional looks in a child's mouth and asks simple questions about hygiene practices and tooth pain or changes.

SEALANT

A physical barrier to decay. Sealants consist of a thin, plastic-like coating applied to teeth to prevent cavity formation.

FLUORIDE

A mineral that rebuilds and strengthens tooth enamel, preventing the initiation and progression of decay.

OREGON HEALTH AUTHORITY (OHA)

State agency in charge of the Oregon Health Plan and other health services.

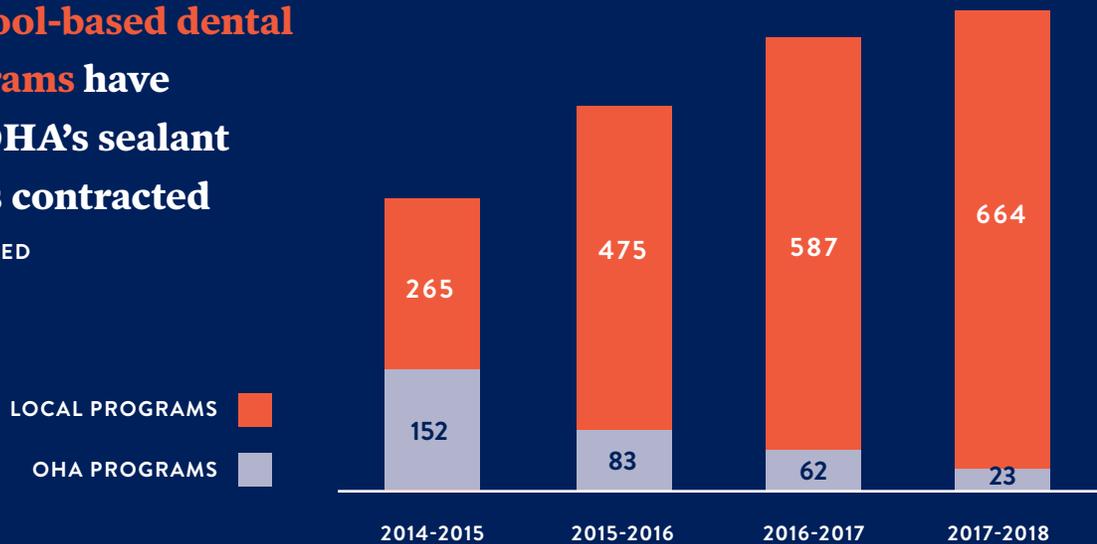
School-based dental health programs have expanded significantly in Oregon over the past decade. Two of the state's longest-running programs are Multnomah County's School and Community Oral Health Program and Salem-Keizer School District's Dental Health Solutions for Children, both of which were developed in the 1990s.

In 2007, the **Oregon Health Authority (OHA)** established its statewide school-based dental health program with a focus on serving high-poverty schools. Over time, additional local programs also developed in response to growing concerns about the health of children's teeth throughout the state. As local programs were able to serve more schools in their communities, OHA's program contracted. In 2016, Senate Bill 660 authorized OHA to begin to certify local programs, effectively shifting OHA's focus from providing programming to oversight of other programs. By the 2017-2018 school year, OHA had certified 21 school-based dental health programs, providing services to over 660 Oregon schools in all 36 counties. The chart below shows the number of schools reached by local programs and OHA's program annually, as tracked by OHA.¹²

In 2014, Oregon Community Foundation (OCF) declared children's dental health a strategic priority and launched the Oregon Children's Dental Health Initiative, supporting local school-based dental health program development, expansion and improvement. The Initiative

As local school-based dental health programs have expanded, OHA's sealant program has contracted

OF SCHOOLS SERVED



SOURCE: A. Umphlett, personal communication, February 12, 2019. **NOTE:** Data includes only programs OHA was tracking annually; certification has significantly improved tracking such that data is more complete in recent years.

was informed by a decade of OCF efforts to support children's dental health programs around the state, including those of the Reed and Carolee Walker Fund at OCF and OCF's Regional Action Initiative, through which the Ready to Smile program was developed to serve students on the south coast.

Partners such as A-dec, The Collins Foundation, The Ford Family Foundation, Kaiser Permanente, Meyer Memorial Trust, Northwest Health Foundation, and Providence Health and Services were instrumental in expanding the reach of the Initiative to support 15 programs statewide. OCF's board of directors committed \$1.62 million for school-based grants, and funding partners contributed an additional \$1.6 million. Donors to OCF advised funds donated an additional \$155,000. More information about programs funded through the Initiative is found on page 15.

The Oregon Children's Dental Health Initiative has three main strategies:

EDUCATION AND ENGAGEMENT

focused on building awareness of children's dental disease and promoting children's dental health.

FUNDING FOR COMMUNITY-BASED PREVENTION PROGRAMS

including increased access to school-based dental health services and increasing the number of medical professionals who actively screen for oral disease.

LEADERSHIP AND ADVOCACY

to shape the state's policies and procedures to significantly improve children's dental health in Oregon.



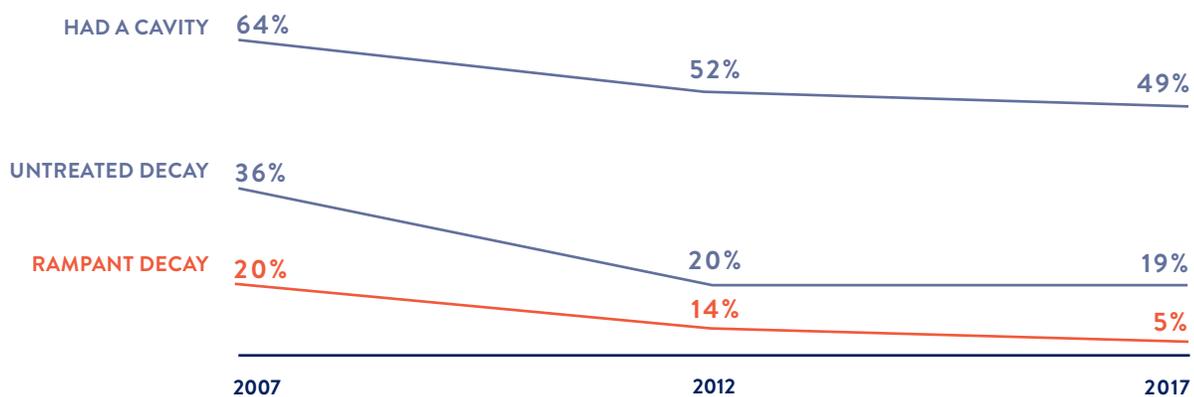
Virginia Garcia Memorial Foundation

Childhood Tooth Decay Remains Far Too Common in Oregon

Preliminary results from the 2017 Oregon Healthy Growth and Smile Survey indicate that nearly half of children in Oregon have a cavity by age 9, and two out of every five cavities will go untreated. This represents little change from prior assessments, except for a significant reduction in the proportion of students with rampant decay from 14 percent in 2012 to just 5 percent in 2017.¹³

Children's dental health in Oregon improved only slightly between 2012 and 2017, though **rampant decay** rates dropped significantly

% SURVEYED WITH CAVITIES, UNTREATED DECAY, OR RAMPANT DECAY



Preliminary data from the 2017 Oregon Healthy Growth and Smile Survey. SOURCE: A. Umphlett, personal communication, January 18th, 2019.

Preliminary results from the 2017 Oregon Healthy Growth and Smile Survey indicated that 39 percent of 6-9-year-old children in Oregon have dental sealants.¹⁴ While this is higher than the Healthy People 2020 goal of about 28 percent, Oregon's sealant rate for this age group remains just below the national average of 40 percent.¹⁵

Oregon's rates of tooth decay are particularly high for members of historically underserved communities. Low-income communities, rural communities and communities of color experience particularly high rates of decay. According to the 2012 Oregon Healthy Growth and Smile Survey, 68 percent of Oregon's Latino children have tooth decay, compared with 47 percent of white children.¹⁶ The single greatest risk factor for childhood tooth decay is poverty. In Oregon, 63 percent of children in poverty experience tooth decay, compared with 38 percent of those in higher-income homes.¹⁷

Systemic barriers make it difficult for some families to access care in Oregon. Social determinants shape, support and constrain individual choices when it comes to health. Poor health can serve as a symptom, indicator and reinforcer of poverty. There are many reasons why children go without dental care, including systemic barriers like geographic isolation; families' concerns about cost and difficulty securing time off from work, especially from hourly jobs; and lack of reliable transportation or child care. In some places in Oregon, these barriers have existed for generations.

In addition to social determinants, lack of knowledge and attitudinal barriers can prevent children from receiving dental care. In the United States, there is a general lack of knowledge or understanding about the importance of dental health and its relationship to overall health. The mouth is often considered separate from the rest of the body, and oral health issues are often dismissed as mainly cosmetic. Oral hygiene is not generally included in health education that students receive, and dental screenings are not as common in schools as hearing, eyesight and scoliosis tests.

This lack of knowledge about the importance of dental care can also be coupled with apprehension about receiving it. Families or children may be fearful about visiting a dentist. Some caregivers may be concerned that a child's tooth decay will reflect poorly on them, causing others to see them as a "bad parent."

POOR ORAL HEALTH CAN BE A SYMPTOM, INDICATOR, AND REINFORCER OF POVERTY:

Children with low-wage or unemployed caregivers are more likely to experience tooth decay. When children have tooth decay, their caregivers are more likely to miss work or school. Missed work time is often unpaid, which can put an additional stress on family finances. This can be especially difficult for low-wage or hourly workers, who are most likely to face this issue in the first place.



Virginia Garcia Memorial Foundation

Even with insurance coverage, families often have limited access to care. Fewer than half of US dentists participate in Medicaid or CHIP. Only a small percentage of dental professionals devote a substantial part of their practice to serving those who are poor or in rural communities.

SOURCE: ASTDD. (November 2017). Best Practice Approaches for State and Community Oral Health Programs [PDF file]. Retrieved from <https://www.astdd.org/docs/sealant-bpar-update-11-2017-final.pdf>

Lack of optimally fluoridated water in much of Oregon presents another challenge. Water fluoridation is the most equitable, economical and efficacious way to prevent tooth decay at the community level. Fluoride is naturally occurring in water, and water fluoridation is the process of adjusting the amount of fluoride to a level protective against decay. Drinking fluoridated water provides frequent and consistent contact with low levels of fluoride for everyone within a community. Optimally fluoridated water reduces tooth decay in children by 18-40 percent.¹⁸ Seventy-five percent of Americans are served by fluoridated water systems.¹⁹ Oregon has one of the lowest rates of water fluoridation in the United States. Fewer than 22 percent of Oregonians have access to optimally fluoridated water.²⁰ Portland is the largest urban area in the United States without water fluoridation.²¹

OREGON HEALTH PLAN (OHP)

Oregon's Medicaid program, which provides health coverage to low-income people.

CHILDREN'S HEALTH INSURANCE PROGRAM (CHIP)

A federal program administered through states that provides insurance to children up to age 19 with family incomes too high to qualify for Medicaid.

Though all low-income children in Oregon should have dental insurance, many do not get the care they need. Coverage under the **Oregon Health Plan (OHP)** includes preventive, restorative, and acute dental care. In 2017, all low-income children became OHP eligible, regardless of citizenship status. But coverage does not necessarily equate access. In 2015, just over half of children on OHP received preventive dental care.²²

Many communities do not have enough dentists who accept pediatric and/or OHP patients. In Oregon, 61 percent of dentists do not accept patients insured by OHP or the **Children's Health Insurance Program (CHIP)**.²³ Initiative program coordinators report that in some communities, it can take 6-9 months for families to get dental appointments.

One barrier is procedural; coordinators report that some dentists find the claim reimbursement process prohibitively arduous. Another barrier may be how dentists are paid. Insurance companies receive monthly capitated

As the Affordable Care Act (ACA) reformed health care nationally, Oregon launched its own health care system transformation. In 2012, the Oregon Health Plan (OHP), the state’s Medicaid plan, evolved from a fee-for-service to a managed care system in which coordinated care organizations (CCOs) provide medical, prescription, mental health and oral health services for patients in a coordinated system.

payments based on OHP enrollment, rather than on how many OHP members received care. These payments are passed on to dentists, many of whom are part-owners of **Dental Care Organizations (DCOs)** and receive a share of the DCO’s profits. This payment structure does not inherently motivate either insurance companies or dentists to accept OHP members, as they are paid regardless of whether they see or treat OHP members.

Efforts are underway to improve the system of care in Oregon, primarily by incentivizing CCOs to provide preventive care. The creation of **Coordinated Care Organizations (CCOs)** in 2011 was part of a concerted effort to develop more oversight and incentivize provision of efficient, quality care to all OHP members. CCOs are networks of health care providers that deliver primary, behavioral, mental and dental care and focus on prevention. Each CCO region develops a Community Health Improvement Plan, some of which include dental health goals. For example, the Central Oregon region’s plan includes the prevention goal “keep children cavity free.”

OHA incentivizes CCOs to improve population health in their communities by releasing a portion of their payments only when they meet a benchmark or improvement targets on a set of quality health metrics. One of these 17 metrics tracks the proportion of children ages 6-9 and 10-14 with dental sealants. Since the dental sealant metric was added, CCOs have reported a steady increase in the number of children with sealants – exceeding the benchmark of 20 percent in 2016. As of 2017, the sealant rate across all CCOs was reported at almost 27 percent (individual CCO rates vary from 22.5 to 29 percent).²⁴

DENTAL CARE ORGANIZATION (DCO)

Dental organizations providing dental care to individuals receiving dental care coverage under OHP.

COORDINATED CARE ORGANIZATION (CCO)

A network of local health care providers serving individuals receiving health care coverage under the Oregon Health Plan. CCOs focus on prevention and management of chronic conditions. Oregon is served by 15 regional CCOs.



La Clinica Del Valle Family Health Care Center

HEALTH DISPARITIES

Differences in health status between individuals, populations or communities related to social or demographic factors such as race, gender, income or geographic region.

FREE OR REDUCED-PRICE LUNCH

The United States Department of Agriculture's National School Lunch Program. Student eligibility for Free or Reduced-Price Lunch is used as a proxy for family income. Students from low-income families are at a greater risk for tooth decay.

School-Based Dental Health Programs are an Effective and Evidence-Based Approach to Improving Oral Health

Preventing tooth decay is important throughout the lifespan, but intervention is particularly important for elementary school-age children, when caries incidence is high. School-based dental health programs are an effective, evidence-based prevention approach to addressing children's health needs. These programs reduce dental pain and suffering and are a highly effective way to reduce states' oral health costs, providing cost savings to Medicaid and society within two years.²⁵

Schools are an opportune setting to reduce **health disparities**, as more than 50 million children in the United States spend a significant portion of their daily lives in school.²⁶ Schools have a clear interest in promoting students' health, well-being and ability to learn. Missed school time because of chronic illness, including tooth decay, leads to poorer performance in school.²⁷

School-based dental health programs are an important way to reach children from low-income families, who are less likely to receive private dental care.²⁸ The Association of State and Territorial Dental Directors (ASTDD) recommends that programs focus on schools where 50 percent or more of the students qualify for **Free or Reduced-Price Lunch**.²⁹ This is considered the best way to reach the most students, while minimizing stigma associated with receiving care. In Oregon, as part of OHA certification, school dental sealant programs must first target elementary and middle schools where 40 percent or more of the students qualify for the National School Lunch Program.

“For a large portion of our community, you go to the dentist when you have a problem [rather than for preventive care]. Some of the issue is the fear, and the education piece to parents about how important the preventive pieces are.”

ELEMENTARY SCHOOL PRINCIPAL

“When we started giving out dental kits, we had a lot of kids who had never seen them before – 4th graders who rarely used a toothbrush and had never seen a dentist.”

PROGRAM COORDINATOR

While sometimes referred to simply as “sealant programs,” school-based dental health programs typically also provide dental screenings and assessment, sealant application, fluoride varnish applications, and oral health education. School-based dental health programs do not replace a **dental home**, instead providing treatment or referrals to clinics and dental offices. The services school-based dental health programs provide are briefly described below.

EDUCATION ABOUT GOOD ORAL HYGIENE PRACTICES. Children who know how to take care of their teeth have less decay and fewer cavities. Health education is provided with a variety of goals in mind, including building knowledge, awareness or skills, or changing attitudes, beliefs or behaviors. Curricula may be directed toward children and their families, school staff and/or the broader community. In a school setting, health education can be delivered to individual students (immediately before, during or after a screening, etc.), to a classroom, or to an entire school. Some school-based dental health programs educate families at community events such as at Back-to-School or family nights.

DENTAL HYGIENE KITS. School-based dental health programs often provide dental hygiene kits to students, which students receive during educational programming and after they finish their screening or other service (e.g., sealants). Dental hygiene kits typically include a toothbrush, toothpaste and floss. Programs are often able to purchase these supplies with bulk pricing from manufacturers.

DENTAL SCREENINGS TO IDENTIFY DECAY AND TREATMENT NEEDS.

A fundamental activity of school-based dental health programs is screening for decay and identifying children with urgent dental needs. During a screening, a dental professional (registered dental hygienist, **expanded practice dental hygienist** or dentist) looks in the student’s mouth using a flashlight and small disposable mirror. Students are asked simple questions about their hygiene practices and whether they are experiencing any pain or changes in their teeth. Screenings typically take a few minutes or less per student; whole classrooms can be screened by a small team of hygienists in 10-15 minutes.

DENTAL HOME

A term for an ongoing relationship between a dental provider and patient. The goal of identifying a dental home is to provide regular, ongoing dental care to patients.

EXPANDED PRACTICE DENTAL HYGIENIST (EPDH)

Dental hygienists with Expanded Practice Permits. In Oregon, EPDHs can provide care to historically underserved populations without the supervision of a dentist.

Sealants protect against 80 percent of cavities for 2 years and protect against 50 percent of cavities for up to 4 years. Children (aged 6 to 11) without sealants have almost three times more first molar cavities than children with sealants.

SOURCE: Community Preventive Services Task Force. (2016). Preventing Dental Caries: School-based Dental Sealant Delivery Programs. US Department of Health and Human Services, Community Preventive Services Task Force.

Only 11 percent of children with sealants require restorative dental care (e.g., fillings), compared with 33 percent of children without sealants.

SOURCE: Curry-Stevens, A. (January 2015). Final Evaluation Report on Oral Health Grantee Accomplishments & Outcomes for Kaiser Permanente Northwest.

APPLICATION OF DENTAL SEALANTS. A dental sealant is a physical barrier to decay – a thin, plastic-like coating applied to teeth to prevent cavity formation. Application is quick and painless, and sealants can last up to 10 years. ASTDD recommends programs focus on sealant application for children in second grade (to seal first molars, which generally erupt at age 6-7) and sixth grade (to seal permanent molars, which erupt at age 11-13).³⁰

FLUORIDE TREATMENTS. Fluoride can be delivered topically (through toothpaste, mouth rinses, varnishes and/or gels), or systemically (through consumption of tablets, drops, lozenges or fluoridated water). Although adjusting fluoride levels in public water supplies is safe and highly effective, providing fluoride through topical application is more widely supported in some communities.

Silver diamine fluoride (SDF) is a treatment option used by some dentists for children with untreated decay that is relatively new in the United States. When applied to tooth decay, silver diamine fluoride immediately halts the decay progress and can also help with sensitivity. Advantage Dental has conducted a quality improvement project in Oregon over the past several years to learn how best to apply silver diamine fluoride strategically in conjunction with school-based dental health programs. Some programs have opted out of participating in this project and have chosen not to use SDF because of concerns about the treatment process and parent understanding; SDF turns decay black/dark on contact and is usually reserved for serious decay situations in which other treatment options are challenging.

Laws about administering fluoride varnish vary by state. Research suggests that access is improved, and cost reduced, when hygienists, dental assistants and primary health care providers such as public health nurses, physician assistants, and other community health workers.³¹ In Oregon, dental hygienists are permitted to apply fluoride varnish.

Topical fluoride varnish is not provided in all Initiative-funded programs. Many programs initially planned to include fluoride but determined for various reasons that it was better not to. Many programs are unable to provide fluoride varnish at least twice per school year (the American Dental Association recommends 2.26 percent fluoride varnish applied at 3-12-month intervals for children³²) or face coverage restrictions from insurance providers, making fluoride varnish cost prohibitive. Providing fluoride can stymie support for the program from schools and families. This is often due to fear or misinformation about the risks associated with fluoride. Some programs have found that when fluoride is included on consent forms, parents are less likely to consent to screenings or other services.



Providence Seaside Hospital

HELPING FAMILIES ACCESS FOLLOW-UP AND ONGOING DENTAL CARE.

Students' screening results are sent home to their families with information about upcoming dental needs; communication encourages ongoing preventive care, including sealant application where appropriate. If urgent care is needed, program staff alert families, as well as school staff and insurance providers as appropriate. Depending on permission and arrangements with the school and insurance provider, program staff may help families access follow-up care, or that may be the responsibility of the school or insurance provider.

“Sometimes they come in with a broken tooth, and you ask them: ‘are you in pain?’ And they say no. I think they’re embarrassed, or their parents can’t afford to have their teeth fixed, and they know it.”

HYGIENIST

The Oregon Children’s Dental Health Initiative has Increased Support for and Access to School-Based Dental Health Programs

Four key findings from the Oregon Children’s Dental Health Initiative:

1. The Oregon Children’s Dental Health Initiative expanded the reach of school-based dental health programs.

During the 2017-2018 school year, the 15 programs funded by the Initiative served students in 279 elementary and middle schools, reaching 40 percent of the school districts in 22 of Oregon’s 36 counties.

2. What it costs to run these programs varies depending on reach and context.

The Initiative-funded programs vary in scope, community and context, which impacts the size and structure of program budgets.

3. Program coordination is critical to the success of service delivery.

One of the most important lessons learned through the Oregon Children’s Dental Health Initiative to date is the value and nature of coordination of the school-based dental health programs. While these programs often partner with others to provide these important services, the value of, and therefore funding for, coordination itself is often overlooked.

4. Programs share seven principles for coordination while adapting to local needs and resources.

How services are delivered varies to some degree for each individual school-based dental health program, community and population served. Programs adapt to the needs and priorities of schools and communities to best serve as many students in the target population as possible. Despite these differences, the Initiative’s school-based dental health programs share seven principles for successful coordination.

- Adopt a public health approach.
- Adapt services to meet community needs and complement existing resources.
- Build trusting, long-term relationships within schools.
- Prioritize positive oral health care experiences for students.
- Provide education that is developmentally and culturally appropriate.
- Connect with families to support continuity of care.
- Engage local champions.

The Oregon Children's Dental Health Initiative expanded the reach of school-based dental health programs.

Fifteen school-based dental health programs received funding through the Oregon Children's Dental Health Initiative. Six developed brand-new programs, many serving schools and school districts not previously served by OHA or other local programs. Nine improved and expanded existing programs, building relationships with new schools and developing new or deepened partnerships within local communities and with DCOs and CCOs.

The Initiative-funded school-based dental health programs vary in their size and geographical reach; they include the Salem-Keizer School District's Dental Health Solutions for Kids, which serves thousands of students in more than 30 schools in the second-largest district in the state; Providence Seaside's Healthy Smiles, which serves about 500 students in six schools in five small districts on the northern coast; and Eastern Oregon Healthy Living Alliance's Healthy, Happy Smiles, serving more than 1,000 students in 20 schools spread across 16 districts covering much of the eastern half of Oregon.

Initiative funding contributed substantially to the ability of these 15 programs to provide and improve services to students. Other factors also contributed to this expansion, including the following:

- The Oregon Health Authority intentionally contracted its own sealant programming as Center for Disease Control and Prevention funding ended and local programs became ready to take over coordination in schools once served by OHA directly (more information about this shift is on page 4).
- The introduction of the sealant metric further motivated some CCOs and DCOs to expand their own efforts to conduct school-based dental health programs. In at least some cases this occurred in partnership with local programs such that local program capacity was bolstered as DCOs provided funding and in-kind support (more information about the sealant metric is on page 9).

In 2017-2018,
Initiative-funded
programs:

SERVED STUDENTS IN MORE THAN
**279 elementary and
middle schools in
40 percent**

OF OREGON'S SCHOOL DISTRICTS

SERVED SCHOOLS IN
22 of the 36 counties
IN OREGON

PROVIDED EDUCATION TO OVER
25,900 students

PROVIDED OVER
33,000 dental kits

CONDUCTED MORE THAN
23,500 screenings
OF FIRST-, SECOND-, SIXTH- AND
SEVENTH-GRADERS

PLACED MORE THAN
27,500 sealants

PERFORMED MORE THAN
**6,900 fluoride varnish
applications**

- Most of these programs would not be able to do as much as they do, as well as they do, without local partners. There are examples of this later in this report, including in the case studies starting on page 31.
- Other funders and donors have also supported these programs, allowing them to work on improvements and expansion efforts over time; the Oregon Children’s Dental Health Initiative is not the only funding source for any of the Initiative-funded programs (more about funding sources for programs is on page 18).

Screening results indicate an ongoing need for care for many of the students served. Several types of information about the health of children’s teeth are captured through screenings. The two shared here are 1) screenings during which children with existing treated decay (fillings, etc.) and/or untreated decay are identified and 2) the resulting level of need for treatment; each screening results in the designation of either no obvious problems, early care needed or urgent care needed.

In 2017-2018, 23 percent of all screenings identified untreated decay, and another 38 percent identified treated decay. Screenings of first- and second-graders showed slightly higher rates of both untreated and treated decay.

Almost a quarter of screenings identified a need for early or urgent care. Approximately 3 percent of screenings (788) recorded a need for urgent care – students experiencing pain, infection or swelling that necessitated a dentist visit within 24-48 hours. An additional 5,434 screenings (approximately 22 percent) identified students in need of early care – they had caries without accompanying signs or symptoms, or other oral health problems requiring care before their next routine visit, ideally within the next several weeks.

The Basic Screening Survey divides urgency for dental care into three categories:

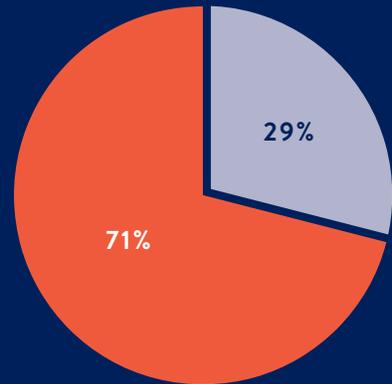
The Basic Screening Survey, developed by the ASTDD (<https://www.astdd.org/basic-screening-survey-tool/>), is used by all of the Initiative-funded school-based dental health programs. The screening process identifies whether a child has any untreated decay, treated decay (e.g., fillings), or existing dental sealants on molars, and the urgency of need for follow-up dental care.

- no obvious problems are seen
- early dental care is needed: the child has caries without accompanying signs or symptoms, or other oral health problems require care before their next routine visit; a dental visit is recommended within the next several weeks
- urgent need for dental care: the child has signs or symptoms including pain, infection or swelling; a dental visit is required as soon as possible.

SCREENING RESULTS INDICATE AN ONGOING NEED FOR CARE FOR MANY OF THE STUDENTS SERVED.

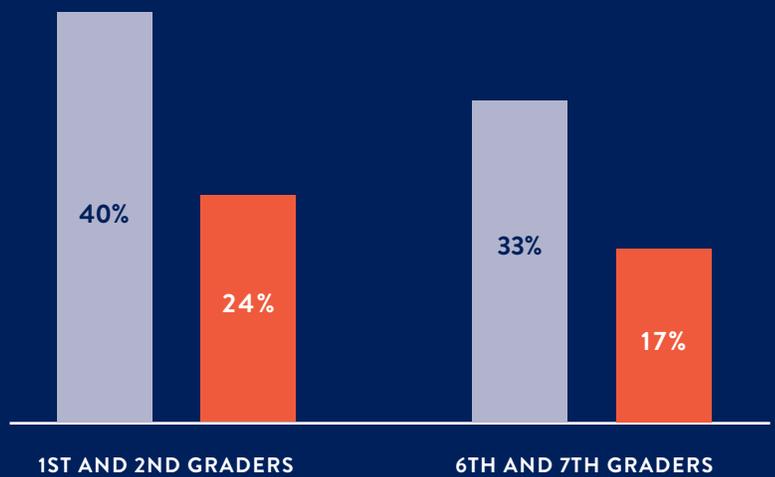
Initiative programs conducted many more screenings with **first- and second-graders (16,776)** than with sixth- and seventh-graders (6,891).

1ST & 2ND GRADERS
6TH & 7TH GRADERS



Screenings identified more treated and untreated decay among first- and second-graders than sixth- and seventh-graders

TREATED DECAY UNTREATED DECAY



Almost a quarter of all screenings identified early or urgent care needs

NO OBVIOUS PROBLEMS EARLY CARE NEEDED URGENT CARE NEEDED

1ST AND 2ND GRADERS

72%

24%

4%

6TH AND 7TH GRADERS

82%

16%

2%



Salem-Keizer School District 24J

A 2016 systematic review of nine studies on twelve school-based and school-linked dental health programs found that the median cost per student served was \$76.09 (with a range of \$33.36-\$163.16). Ten programs reported that labor accounted for more than two-thirds of costs.

SOURCE: Griffin, S., Naavaal, M.S., Scherrer, C., Patel, M. & Chattopadhyay, S. (2017). Evaluation of School-Based Dental Sealant Programs: An Updated Community Guide Systematic Economic Review. *American Journal of Preventive Medicine*, 53, 407-415.

What it costs to run these programs varies depending on reach and context.

The Initiative-funded programs vary in scope, community and context, which impacts the size and structure of program budgets. Annual budgets for most Initiative-funded programs range between \$50,000 to \$550,000. Much of the variation is related to the following factors:

WHETHER THE PROGRAM IS LOCATED WITHIN A LARGER CLINIC. Some programs are embedded in larger clinics. Despite efficiencies from sharing space, staffing, etc., these programs can appear more expensive than programs that operate more independently. This is because it is often difficult to separate the budget of the school-based dental health program from the larger clinic budget. Programs configure budgets differently, depending on what they consider to be part of the program versus part of the clinic (e.g., whether overhead costs are included).

THE SIZE AND SCOPE OF CONTRIBUTIONS FROM PARTNERS.

Programs managing most or all aspects of their program independently have larger relative budgets than programs that work with partners providing dental hygienist staffing, supplies, volunteers to assist with supplies or data collection, or other supports. Not all programs track partnership contributions in the same way, making it difficult to assess the full costs of some programs.

STAFFING CONSIDERATIONS AND DIFFERENCES IN CONTEXT. Staffing can be more expensive in urban areas, where the cost of living is higher. Rural programs, which may serve larger geographic areas, can incur higher travel costs. Programs operating in more rural areas may serve an equal or greater number of schools as programs in smaller, dense urban areas. However, the total number of students reached by urban programs is generally greater.

Because of these and other factors, it is difficult to see a relationship between budget size and the number of schools or students reached by a given program. In other words, a larger budget does not necessarily correlate with greater reach.

For most programs, the largest expense is staffing, including benefits and payroll expenses. Staffing typically accounts for between 65 and 85 percent of the overall program budget. Staffing includes but isn't limited to program coordinators; some programs also include hygienists and support staff in their budgets.

Each Initiative-funded program is managed by one or more program coordinators. The total full-time equivalent (FTE) needed to coordinate each program varies with program size; Initiative-funded programs have anywhere from a single 0.375 FTE coordinator to a small team of full-time coordinators. Some coordinators are dental professionals as well, and deliver services in addition to managing the program.

Based on budget information submitted by Initiative grantees, one FTE focused on coordination costs an estimated \$35,000 to \$75,000 per year (salary and benefits), or about \$57,000 on average. There are many reasons for this range, including the experience and expertise of coordinators, as well as the location, scope and scale of the program.

All programs rely on more than one source of funding, including:

- Private donor and/or foundation funding
- Funding from county or local public agencies
- Funding from CCOs or DCOs
- Reimbursements for services from DCOs and OHP
- Local organizations like Kiwanis and Assistance League

Most programs also receive significant in-kind contributions in the form of volunteer time, space, supplies, staffing and services provided by collaborative partners, etc.

“It’s really sad to see a little one in school where pain is an ordinary part of life. [They] have always had abscesses [and] don’t know what it is like to be without them. It is wonderful to see them get into dental care.”

VOLUNTEER

Kemple Memorial Children’s Dental Clinic





Virginia Garcia Memorial Foundation

Program coordination is critical to the success of service delivery.

Coordinators have a wide range of responsibilities, including maintaining program certification; building relationships with key school leaders; coordinating with CCOs, DCOs and local partners; managing staffing and logistics for school visits, including volunteer coordination; securing consent for services; providing education to students and families; tracking and reporting the results of screenings and services delivered; and helping families connect to follow-up and ongoing care.

Program coordinators are vital to the success of these programs. Without coordination, programs may struggle to build and maintain relationships with schools, collaborate with other community resources, and continually respond to community needs to ensure students are served as efficiently and equitably as

possible. Additional detail can be found in the next section, which outlines shared principles for the coordination of school-based dental health programs. The following examples highlight some of coordinators' critical responsibilities:

- Coordinators schedule one to two visits per school year in anywhere from three to 40 (or more) schools – requiring a delicate calendaring process that prioritizes school needs and preferences.
- Differences in school preferences and procedures often requires that coordinators manage multiple types and versions of consent forms. Coordinators typically use more passive, opt-out consents for screenings, and require an active opt-in consent form for sealants and other services.

- Coordinators work to increase the number of consent forms returned in order to screen and serve as many students as possible during each visit. They often accomplish this through close communication with school staff. Forms may be included in school registration packets or sent home with students (e.g., in homework folders). To encourage consent return, many programs provide small incentives for classrooms with the highest rate of returned forms.
- A sizable store of supplies must be maintained and transported to and from schools. Supplies include large portable equipment, such as dental chairs and UV light equipment, as well as items like disposable gloves, mirrors, sealant supplies, educational materials and dental kits (toothbrushes, toothpaste and floss).
- Coordinators ensure that sufficient staff are available to conduct the number of screenings, sealant applications and other services needed; coordinators often work with multiple expanded practice dental hygienists and dental assistants who work on contract or volunteer for the program.
- Coordinators handle day-of logistics, communicating with school staff, teachers, dental professionals and volunteers, often ushering students to and from their classrooms.
- Coordinators manage the data tracking, entry and reporting on children screened and sealed. That data is shared with DCOs and other partners, including funders. Many programs use paper forms to capture screening results and services delivered, and staff must later enter data into multiple data systems, sometimes entering the same data into DCO databases and their own tracking systems.
- Establishing and maintaining OHA sealant program certification is another important task for program coordinators. OHA sealant program certification has standards for the placement of sealants, requires that sealant retention checks are conducted, and mandates that programs share data about their work with OHA.

These responsibilities may be those of a single person, shared across several staff or even distributed across partners. This depends on local needs, resources and partnership structures.

“The complicated day is the first day, screening day. At schools where we don’t have a [coordinator], we have to spend a lot of time rounding kids up, finding their classrooms, tracking down forms, wrangling them. It’s a huge help to have someone else in that role—we have a lot more time to provide services.”

HYGIENIST

Programs share principles for coordination while adapting to local needs and resources.

WHAT ARE PRINCIPLES?

Principles are guiding statements which provide direction and a foundation for success. Principles are not goals or outcomes, nor are they prescriptive. Principles do not result in a single program or practice model and are not applied to all programs in the same way. Instead, principles illustrate how diverse programs adapted to different communities and contexts share a set of values that make them successful.

A principle is like a recipe that calls for “salt to taste” rather than “1/4 teaspoon of salt.”

SOURCE: Patton, M. Q. (2011). *Developmental Evaluation: Applying complexity concepts to enhance innovation and use*. New York: Guilford.

The Initiative’s school-based dental health programs share seven principles for successful coordination. Each of the Initiative program coordinators embodies most, if not all, of these principles in the way they approach the work.

- Adopt a public health approach.
- Adapt services to meet community needs and complement existing resources.
- Build trusting, long-term relationships within schools.
- Prioritize positive oral health care experiences for students.
- Provide education that is developmentally and culturally appropriate.
- Connect with families to support continuity of care.
- Engage local champions.

Collectively, these principles define successful coordination of programs in broad terms, leaving room for adaptation. The principles can be implemented in varied ways in different communities, in response to those communities’ unique needs and resources. This is reflected in the varying ways that the Initiative programs deliver services – both what services are provided and how they are provided (e.g., varying partner arrangements) vary across the programs as coordinators work to respond to the needs and priorities of schools and local communities.

Although the principles are presented here as a list, they are not hierarchical and are deeply interconnected. A description of each principle and a few examples of what the principles look like in practice are included in this section. Additional examples of these **principles** in practice can be found in the five case studies that begin on page 31.

Principles for successful coordination:



**ADOPT A
PUBLIC HEALTH
APPROACH**



**MEET
COMMUNITY
NEEDS**



**BUILD
RELATIONSHIPS
WITHIN SCHOOLS**



Adopt a public health approach.

School-based dental health program coordinators take an equitable, population-based approach to maximize health benefits for as many students as possible. This is achieved through a focus on health prevention and promotion, and by prioritizing populations at greatest risk for tooth decay. Rather than identifying individual students at high risk of decay, the ASTDD recommends that programs serve schools with large populations of low-income students.³³ This is considered the best way to reach the most students with the greatest need, while minimizing stigma associated with receiving care.

Program coordinators also support culture change around oral health, striving to understand and address the social determinants of health and building a deep understanding of the health care system and barriers to care specific to their community.

PRINCIPLE IN PRACTICE

The Healthy Kids Outreach Program (Mercy Foundation) is based in Douglas County, which ranks near the bottom among Oregon counties on measures such as healthy food access, child hunger, smoking, physical inactivity and obesity. The HKOP program coordinator approaches her work with all these health outcomes in mind, seeing HKOP as one effort toward building a larger culture of health in the county, while recognizing that supporting health equity is a matter of culture change, which may take years, decades or generations to take hold.

Virginia Garcia Memorial Foundation and Health Center’s School-Based Health Center Program works in partnership with CCOs, DCOs and other partners to track and review data about patient access to care. Monthly meetings allow for close collaboration to ensure children, especially those at greatest risk, such as children in the foster care system, are receiving needed services. This collaboration also supports information sharing about clinical practices and broader community needs.

The InterMountain Education Service District (IMESD) program coordinator sees broad community advocacy and awareness building as one of her key roles. She attends many community meetings and incorporates oral health in broader health fairs whenever possible. In part due to her efforts, Morrow County’s Advisory Council identified oral health as one of four priority areas, setting a goal to increase the number of dental screenings and provide risk-based dental services and utilization. To support that goal, and its broader efforts, IMESD is developing trainings and educational materials for teachers, health care providers, librarians and community health workers, who are using them during home visits. In addition, IMESD is now working on development of a local oral health coalition.



**PRIORITIZE
POSITIVE
EXPERIENCES**



**PROVIDE
APPROPRIATE
EDUCATION**



**CONNECT
WITH
FAMILIES**



**ENGAGE
LOCAL
CHAMPIONS**



Adapt services to meet community needs and complement existing resources.

School-based dental health program coordinators are flexible, dynamic and responsive, adapting to meet the needs of their schools and communities. A deep understanding of local context and history, coupled with a thorough needs assessment, can help ensure that programs address community needs. Coordinators avoid duplicating efforts by collaborating with others with similar goals within the community and drawing on existing resources such as mobile dental services and volunteer organizations. Coordinators working in partnership with other community resources are well positioned for efficiency, continuity and sustainability.

PRINCIPLE IN PRACTICE

Kemple Clinic's Screen and Seal Program is well known and trusted in its hometown. In other communities, families may not understand the difference between sealants and fluoride or think that consenting to sealant application also means consenting to fluoride treatment. In Redmond, these misconceptions resulted in a low number of consent forms returned. The Screen and Seal program coordinator decided that providing sealants was priority, so to eliminate confusion and

encourage consents, fluoride was eliminated from the services provided in Redmond. This strategy was successful: consent returns increased, screenings became quicker and more efficient, and more students received preventive services. Any student in Redmond schools can come to Kemple Clinic during the year and receive screenings, sealants and fluoride. In the long term, changing misconceptions about fluoride will take education, awareness building and time.

The Tillamook Smiles program was developed as a collaborative effort between the Tillamook Education Foundation and Tillamook County Health Department and was designed to complement existing efforts of OHA's sealant program. OHA hygienists conduct screenings and sealant clinics. Smiles staff work in close coordination with CareOregon, Columbia Pacific CCO, Willamette Dental and MODA to develop a follow-up/referral protocol that helps connect children to care. Bilingual care coordinators at Tillamook County Health Center help families access treatment when needed, and Tillamook School District's Family Resource Coordinator also helps connect families to a range of community resources, including dental care and housing.

“We’re working to change the culture of this county. Now that there isn’t the same level of urgent care need, we can pivot more fully into prevention and impacting policy change... Our real goal, of course, with policy and prevention work is getting fluoride into the water. There’s such a fear factor about it for large swaths of this county. So that’s a much longer-term goal – for now, it’s all about laying the groundwork and building those trusting relationships.”

HEALTHY KIDS OUTREACH PROGRAM MANAGER



Build trusting, long-term relationships within schools.

Program coordinators establish relationships with school leaders and staff through reliable communication and long-term presence in schools. Schools have a clear interest in supporting student health and boosting students' ability to learn. Still, partnerships between programs and schools can be challenging and take time to develop. Early on, coordinators may need to reestablish key relationships each year, repeatedly explaining the value of their program and benefits to the school and students.

Coordinators are mindful about accommodating the needs of individual schools, remaining flexible around schedule, space, timing and other environmental constraints while working diligently to minimize students' missed class time. As relationships grow and school staff see the benefits of programs, schools often become more welcoming in a variety of ways (e.g., by providing increased space and time or supporting communications with students and families).

PRINCIPLE IN PRACTICE

EOHLA's Healthy, Happy Smiles Program served 10 schools in Harney County during the 2016-2017 school year, screening just 55 percent of eligible students because so few consent forms were returned. During the following school year, 68 percent of eligible students were screened. Program staff attributed this change to several key factors, with relationship building at the core. Eastern Oregon communities are small and often close-knit, and personal relationships—especially with principals, secretaries and school nurses—are crucial

to program success. Central to the program's ongoing success is its relationship with the Harney Education Service District, which has helped fully integrate dental screenings with existing vision and hearing screenings, elevating the importance of these services and normalizing the program.

Providence Healthy Smiles (Providence Seaside Hospital) weathered a leadership transition last year at one school. As a result, the school did not send consent forms home early and opted out of health education. To prevent this in the future, the program coordinator is working to get a memorandum of understanding (MOU) with the school. An MOU will help ensure students know about available services, have time to return consents, and receive the health education they need. An MOU also lessens the impact of administrative changes. Building relationships with staff and administrators is important, and so is creating a system to support those relationships and the expectations that go along with them.

Dental Health Solutions for Children (DHSC) is part of the Salem-Keizer School District. Being located within an education system provides opportunities for coordination and collaboration; it also pairs dental services with the health services provided by the district. DHSC coordinators easily communicate with administrators, building a deep understanding of needs and working closely with school nurses and Community School Outreach Coordinators.



Prioritize positive oral health care experiences for students.

School-based dental health programs are part of normalizing dental care experiences for students. This can be achieved by meeting students where they are, using language they understand, and having an attitude that is trusting and open. Staff recognize that this is one health care encounter within a lifetime, and that part of their role is building comfort with dental care.

Dental professionals providing services in schools play an outside role in advancing this principle. This work requires hygienists who are technically skilled and able to make quick but informed decisions about how best to provide care to individual students. Program coordinators encourage hygienists, assistants and volunteers to build rapport with students and recognize that communicating well with students is critical to program success. Coordinators ensure that hygienists work effectively with children by having them work in tandem, cross-train, and by evaluating how well hygienists handle children and teens.

For some students, these screenings are their first experience with dental care. Other students may have had previous dental visits that were painful, scary or unpleasant. Many programs incorporate trauma-informed care, centering students' autonomy and psychological, emotional and physical safety. Prioritizing positive care experiences may mean that a fearful or

reluctant student will not receive services the first time a program visits a school. Instead, hygienists focus on building comfort over successive visits.

PRINCIPLE IN PRACTICE

Kemple's Screen and Seal Program sometimes sees student who express apprehension and reluctance about screenings. When hygienists sense that students are uncomfortable, they may ask other students who have already been screened to help explain the process and reassure their nervous classmate. This extra step takes a little more time, but when a student has a positive experience, that helps build comfort for receiving care in the future.

In Virginia Garcia's School-Based Health Center Program, hygienists address students' behavioral and language barriers with grace and patience. Hygienists explain the process to each student, describing every piece of equipment and pausing if students become uncomfortable. In one visit, a student was uncomfortable lying still and upset by the sound of portable air machines. Staff made several attempts to make the student comfortable before deciding to defer care to a later visit, determining that it was more important for the student to have a positive experience so he could continue to receive care in the future.

“Last year, we had a third grader who had a lot of behavioral issues in the classroom. The first time we came in he went through the Learning Lab, but wasn't willing or ready to do clinic. The second time we came in, he was ready. It just took a little more time.”

HYGIENIST



Provide education that is developmentally and culturally appropriate.

Children who know how to take care of their teeth have less decay and fewer cavities. School-based dental health programs provide health education to individual students (e.g., chairside) and groups of students (e.g., at school-wide assemblies or in classrooms). To be effective and relevant, health education must be developmentally and culturally appropriate so that students can apply what they learn.

Many Initiative-funded programs have adopted The Dental Learning Lab, an educational program developed by Mercy Foundation. Others developed their own curricula, using tools like “Mojo Monkey” to make education fun and interactive. In some cases, families are educated through students excited to bring home what they learn. Some programs educate families through events like back-to-school nights, increasing their reach and building “ripple effects” of their work.

PRINCIPLE IN PRACTICE

Mercy Foundation’s Dental Learning Lab is the educational curriculum used by many Initiative-funded programs. The Learning Lab is designed to help students understand the how and why of dental health through hands-on activities. Students learn about oral hygiene, nutrition and physical health, and build health literacy. The Learning Lab consists of a series of stations with educational activities. The curriculum is carefully planned so every student can visit each station during a single class period. Volunteers lead each station, explaining the activities and encouraging students. These volunteers include teachers, parents, community members, and local nursing or dental students.

There are four versions of the Learning Lab with age-appropriate objectives ranging from mastering basic hygiene skills and easing anxiety about dental visits to learning about careers in the dental field.

In partnership with Centro Cultural of Washington County, Virginia Garcia has tailored education programming to the local Latino community. The ¡Sonrie! program pairs culturally appropriate oral health education from Centro Cultural staff with screening, sealant and coordination efforts of Virginia Garcia staff. The programming is modeled on the Learning Lab, but has been adapted to be culturally and linguistically appropriate.

InterMountain Educational Service District is expanding educational efforts into the community. In addition to using Learning Labs in schools, they are developing and distributing mini dental education labs to teachers, home visitors, school nurses, librarians, public health nurses and community health workers, and providing oral health education at Oregon Parenting Education Coalition learning picnics.

La Clinica Del Valle Family Health Care Center





Connect with families to support continuity of care.

Coordinators take an individual and systems approach to care, connecting families to existing resources and creating pathways so families can access follow-up services in an ongoing way. Some coordinators take a direct approach to follow-up care, helping families secure appointments at clinics associated with the program, or bringing in dentists with fully equipped mobile units (e.g., dental vans such as through Medical Teams International). Others work with school, clinic, or insurance provider staff to connect families to care.

More broadly, coordinators help families navigate the health care system, and may provide case management and support, helping families secure insurance or find a dental home. In some cases, coordinators help bridge cultural, class and linguistic divides between families and dentists.

Coordinators also work to address systemic barriers to care by providing families with financial support, organizing transportation to a dental clinic or arranging childcare. Addressing barriers requires that coordinators work with other local resources and partners such as school care coordinators, family support workers and social workers, and community health workers.

PRINCIPLE IN PRACTICE

Providence Healthy Smiles Program (Providence Seaside Hospital) sees helping families navigate the health care system as an important component of the program coordinator's role. This may mean that the program coordinator makes many phone calls to establish an initial connection with families, taking time to build trust and understanding once that connection is made. Most students that the program serves qualify

for OHP, but their families are often unaware. The program coordinator helps families navigate the system, explaining what services are covered and connecting families to an OHP assister to secure coverage if needed.

Dental Health Solutions for Children (DHSC; Salem-Keizer School District) coordinators communicate proactively with families in collaboration with school nurses and Capitol Dental Care staff. Families of children who need follow-up care receive paperwork and phone calls that include offers of support tailored to each child and family's situation and depending on the urgency of each child's dental needs. When further assistance is needed, coordinators help parents schedule appointments or connect them more directly to one or more resources including:

- Local dentists who have volunteered to see students with urgent needs pro bono through the Neighborhood Dentist program,
- Capitol Dental Care's voucher program (funded through a grant from Salem Health Foundation),
- The Boys & Girls Club Dental Clinic (which provides no-cost dental services to uninsured Club members through volunteer dental professionals),
- Give Kids a Smile Clinics, or
- The Children's Program, which provides care for students who are uninsured, covering up to \$500 of care per uninsured patient for free.

Medical Teams International dental visits are also scheduled strategically; when the timing and urgency warrants it, coordinators encourage families to take advantage of the opportunity to receive treatment while students are in school via these mobile clinics.



Engage local champions.

Coordinators engage local champions to ensure ongoing alignment with community needs and build a foundation of support for the program. Champions may include others in the health care field including dental health and public health organizations, hospitals and clinics, and other groups concerned with community health. Organizations and individuals in education, equity and child welfare are also important champions. Local business leaders, community and faith groups, culturally-specific organizations and area colleges and universities can also be important supporters.

Champions inform the program; provide financial, in-kind, and/or volunteer support; and act as spokespeople for the program, adding momentum to the work and communicating the program's importance and value in their community. Local dentists, health organizations and nonprofits provide volunteers, supplies, and funding for many programs. These local champions also sometimes staff advisory committees – local groups that provide ongoing guidance and advocacy for programs and that have been particularly valuable for newer programs.

PRINCIPLE IN PRACTICE

Healthy, Happy Smiles (EOHLA) has succeeded in Eastern Oregon with the help of key community partners. In Harney County, one of the program's most important champions is a local dental practice, Burns Dental Group. Employees at Burns Dental have helped collect parent consent forms from multiple schools in the county, assisted with outreach, and supported student learning by leading Learning Lab stations. This involvement of trusted community members helps program staff maintain a presence in the community from EOHLA's offices in Lakeview, located almost two and a half hours

away. These champions advocate for the program and communicate back to EOHLA the concerns and interests of the community, giving up-to-date progress on consent forms and other important on-the-ground tasks.

The Dental Health Solutions for Children Program (DHSC) at the Salem-Keizer School District receives critical support from a number of partners and champions, including local Assistance League volunteers. These devoted volunteers are mostly retired, former school teachers. Together they provide a total of 300 hours of volunteer time annually as members of DHSC's steering committee and by staffing screening visits. Volunteers welcome students when they arrive on screening days, provide administrative support, scribe for the hygienists and help complete and organize paperwork for follow-up with families. Assistance League leaders note that working with the DHSC program is one of their most sought-after opportunities; they are never lacking for volunteers willing to help with screening days. Because of their work with DHSC, Assistance League has also started to organize and fund donations of clothing and shoes for students in Salem-Keizer schools.

“It’s really good to get out here, to see what’s happening in the community, to see the kids that we don’t really see in the office.”

HYGIENIST



“[Hygienists] get to see a lot of kids here that they might not otherwise see. That they generally don’t see. In some ways, it’s a wake-up call. It shows them what’s really going on in the community.”

PROGRAM COORDINATOR



Kemple Memorial Children's Dental Clinic

Case Studies

Of the 15 school-based dental health programs, five are described in more depth in case studies:

- Screen and Seal Program, **Kemple Memorial Children's Dental Clinic**
- Healthy Kids Outreach Program, **Mercy Foundation**
- Healthy, Happy Smiles Program, **Eastern Oregon Healthy Living Alliance**
- Providence Healthy Smiles Program, **Providence Seaside Hospital**
- Dental Health Solutions for Children Program, **Salem Keizer School District**

These five programs represent a diverse set of geographies, from small towns on the Oregon Coast to large cities on the I5 corridor to the mountains of Central Oregon and all the way to the plains and deserts in the eastern corner of the state.

Some of these programs are well established and are building on decades of work and relationships. Others were newly formed for this Initiative and are serving new communities. Each has developed a school-based prevention program that best serves its specific community. All five programs provide examples of what the principles for coordination look like in practice. Particular principles are highlighted in each case study, though each program employs all of the principles in varying ways.

SCREEN AND SEAL PROGRAM

HOME ORGANIZATION:

KEMPLE MEMORIAL CHILDREN'S DENTAL CLINIC

BASED IN: BEND, OR

COUNTIES SERVED:

DESCHUTES, CROOK & JEFFERSON

DCO: ADVANTAGE, CAPITAL, MODA, WILLAMETTE

YEAR ESTABLISHED: 2013

FUNDING THROUGH CDHI FOR: PROGRAM EXPANSION

NUMBER OF SCHOOLS

SERVED 2017-2018: 31

PROGRAM CONTACT:

DEBBI SMITH

WEBSITE:

[HTTPS://WWW.KEMPLECLINIC.ORG/SERVICES-PT/SCREEN-SEAL-PROGRAMS/](https://www.kempleclinic.org/services-pt/screen-seal-programs/)

DESCHUTES COUNTY

POPULATION: 170,183

SIZE: 3,055 SQ MILES

RURAL POPULATION: 28 PERCENT

CHILD POVERTY RATE: 18 PERCENT

SOURCE: The Ford Family Foundation and Oregon State University Extension Service. (May 2018). Oregon by the Numbers: Key measures for Oregon and its counties.

CASE STUDY

Kemple Clinic's Screen and Seal Program

Kemple Clinic has one fundamental goal: to bring dental care to all children in Central Oregon. In the three counties Kemple serves, most of the population is concentrated in Deschutes County, and specifically in Bend, one of the fastest-growing cities in the country. The city's exploding population has been accompanied by economic growth, though the benefits have not been shared by all residents. In many ways, Bend's growth has compounded existing health and social disparities, and the ripple effect extends to smaller outlying towns. Housing stock is low, and demand far outstrips supply. Costs of rent and homeownership are rising precipitously, and the homeless population is growing rapidly. Between 2015 and 2017, Central Oregon's homeless population increased by 31 percent.³⁴ Most regional health care services and resources are concentrated in Bend. Smaller, more isolated Central Oregon towns sometimes lack even basic services.

HISTORY OF PROGRAM DEVELOPMENT

Dr. H.M. Kemple established a clinic in 1962 in a Bend school building, where volunteer dentists treated children with urgent needs. Early partnerships with Deschutes County Schools and the Central Oregon Dental Society expanded the clinic's operations and reach, engaging local dentists to volunteer their time and offices to provide services to as many children as possible across Central Oregon, regardless of ability to pay.

Kemple Clinic remains the only nonprofit organization providing dental care in Central Oregon. The clinic's primary function is to provide regular dental visits (cleanings and screenings, oral health instruction, x-rays, fluoride and sealant application, risk assessment, etc.). Kemple does not have a full-time dentist on staff, and instead relies on a strong base of community and volunteer support from more than 70 dentists, hygienists, periodontists and orthodontists.

A shortage of dentists accepting OHP, combined with high levels of urgent and emergent dental needs, have made it difficult to get a preventive dental care appointment in much of Central Oregon. At Kemple Clinic, preventive and diagnostic services are provided to uninsured, underinsured and underserved young people at no charge. Kemple contracts with four DCOs to provide fee-for-service preventive and diagnostic services to children with OHP coverage

to offset the lack of available preventive services in the region.

Kemple works to increase access to care by meeting children and families where they are, which often means providing services in nontraditional settings in addition to the clinic. These settings include health fairs, Boys & Girls Clubs, community health centers, culturally specific groups and relief nurseries. At these events, staff and volunteers can process and assess up to 500 children and young adults in a single day, demonstrating the magnitude of need for these services in this region.

OVERVIEW OF IMPROVEMENT AND EXPANSION

In 2013, Kemple Clinic launched its Screen and Seal Program, with the support of OCF and other funders and partners. During its first year, the program served 11 elementary and middle schools. The program was a natural expansion of Kemple's decades-long partnership with Deschutes County Schools. Under the Screen and Seal Program, children are served regardless of insurance status or ability to pay, in keeping with the clinic's commitment to its mission and Dr. Kemple's original vision.

The Screen and Seal Program provides screenings, fluoride varnish, sealant applications and dental education to thousands of children in Central Oregon. For the first four years of Screen and Seal, services were provided to all students. Data showed no significant difference in screening results or sealant needs depending on students' insurance coverage. Instead, staff uncovered a backlog of needs. Because of the long-running lack of dental care in many communities, almost 60 percent of students needed sealants. This confirmed that a population-based approach was appropriate.

But the need for dental care in this region is too great for a single program to serve everyone. Staff must make careful decisions to ensure the program is doing the most good. Staff used screening data to determine that providing services to younger students would have the greatest possible impact on prevention of dental disease. Limiting the grades of students served would also strengthen the sustainability of the Screen and Seal Program. Program staff implemented a passive screening process, focusing on students in kindergarten through second grade and in the sixth and seventh grade. Kemple calls this strategy the Seal At The Very Earliest! (SAVE) Initiative and has completed one school year with this model. This new strategy has been successful. The Screen and Seal Program was able to expand the number of schools served from 19 to 31 and extend to Crook and Jefferson Counties, rural places where few services have traditionally been available.



ADOPT A PUBLIC HEALTH APPROACH

Screen and Seal takes a data-driven and population-level approach to providing services. This is appropriate given the level of need in the schools and communities served and supports the program's aim to serve as many children as possible.

CASE STUDY:

KEMPLE CLINIC'S SCREEN AND SEAL PROGRAM

SCHOOL:

LA PINE ELEMENTARY SCHOOL

COMMUNITY: LA PINE, OR

POPULATION: 1,600

GRADES: K-5

STUDENT ENROLLMENT: 406

PERCENT FREE OR

REDUCED-PRICE LUNCH:

> 95 PERCENT

SOURCE: Oregon Department of Education School Report Card (2017-2018) [data file]. Retrieved from <https://www.oregon.gov/ode/schools-and-districts/reportcards/>



PRIORITIZE POSITIVE ORAL HEALTH CARE EXPERIENCES FOR STUDENTS

Screen and Seal hygienists take a gentle, nonjudgmental approach to screenings, and are mindful not to scare or shame students with decay.



BUILD TRUSTING, LONG- TERM RELATIONSHIPS WITHIN SCHOOLS

Working within a new school includes laying the groundwork for a long-term relationship.

Screening day at La Pine Elementary School

La Pine is a small town surrounded by lava rock and the Ponderosa pines of the Deschutes National Forest. La Pine is increasingly becoming a commuter town, as the explosive population growth of Bend reverberates to neighboring communities. La Pine residents are faced with a limited, increasingly expensive housing supply, and many are being displaced.

La Pine is federally designated as a medically underserved area, and among Central Oregon's towns with the lowest capacity to meet residents' primary care, mental health and dental care needs. Despite its relative geographic proximity, lack of transportation isolates many residents from services and amenities available in Bend.

It's November 2017, and The Screen and Seal Program is visiting La Pine Elementary for the first time. Screening day at a new site can present novel, unforeseen challenges, and program staff are working out the kinks, getting school staff and students used to their presence. Program staff don't always know what to expect on days like these, but they have experience working in an array of non-ideal settings: in gymnasiums, sometimes while P.E. classes are taught; in the front hallway of a school; in utility closets.

Today they are working in an empty classroom. Before screenings begin, the program coordinator, volunteer hygienists and dental assistants quickly check in. They expect to find a high level of need for dental care among students. Many are from in low-income households, and all live in an underserved community, with little access to dental care.

As anticipated, many families have not given permission for their child to be screened today. This is not unusual for a new site. Staff have found that when expanding to new communities, they must slowly build an understanding of their services and insurance options and to debunk misinformation about fluoride. It's a matter of developing trust and building relationships over time. The number of consent forms increases as the program makes successive visits to the school, and as school staff, parents and families learn what to expect.

Two dozen kindergartners enter the room, eager to see what the excitement is all about. Many are apprehensive about the screening process. Hygienists know that students may be experiencing dental pain or have past negative associations—or no experience at all—with the dental health system. They know that scaring students is counterproductive, and so they take a gentle, nonjudgmental approach, keeping a “poker face” even when students have

“There are two dentists in the LaPine area, and it’s not clear how difficult it is to get an appointment with them, especially for a child and/or someone on OHP. Bend is an insurmountable distance away for many families in this community. Kemple has tried different strategies to address this, but none have been successful thus far. Those strategies included giving families money for transportation to Bend, but families didn’t go. The Tooth Taxi has come down to Terrebonne, where they recently provided dental services to 55 kids in a single week. But there hasn’t been a similar push in the community here to get the Taxi. Adding to the problem is the fact that the bus can’t make it over the pass and stops attempting mid-October.”

SCREEN AND SEAL PROGRAM COORDINATOR

severe issues. Hygienists provide brief dental education to each student. It can be challenging to determine what students do or don’t know; they often give the responses they think are correct, but that may be untrue. Hygienists provide quick, bite-sized bits of education, using language that is kind but direct to ask about toothbrushing habits and encourage students to brush before school and at bedtime.

Hygienists work in unison to efficiently screen students and minimize missed class time. With each new student, the hygienists remove their face masks and spend a moment checking in, building rapport and comfort. They ask students’ names and whether they have loose teeth—something students are only too eager to talk about!

Hygienists quickly screen students using a dental mirror and flashlight, and as expected, find a high level of unmet need. When students have visible decay or broken teeth, hygienists gently ask if they are in pain. Several students don’t have a toothbrush or share a toothbrush with siblings. As part of this visit, dental kits (complete with a toothbrush, toothpaste and floss) will be distributed to students at the end of the school day.

Students who need additional dental care are noted so the school nurse can follow up with families. School staff visit the classroom to thank Screen and Seal staff and volunteers for what they’re doing to improve children’s health. It’s a promising sign for the program’s future as they build and strengthen their relationship with this school and community. Kemple has made other inroads in La Pine as well, including coordinating a Screen and Seal program with the local La Pine Community Medical Center. During the summer, families have an opportunity to obtain screenings, fluoride and sealant applications within their community. This partnership is in service of building a culture of good oral health in this community, a stronger system that can serve families in need in Central Oregon.

**HEALTHY KIDS
OUTREACH PROGRAM**

HOME ORGANIZATION:

MERCY FOUNDATION

BASED IN: ROSEBURG, OR

COUNTIES SERVED:

DOUGLAS

DCO: ADVANTAGE

YEAR ESTABLISHED: 2006

FUNDING THROUGH CDHI FOR:

PROGRAM EXPANSION

NUMBER OF SCHOOLS

SERVED 2017-2018: 28

PROGRAM CONTACT:

TRINA MCCLURE-GWALTNEY

WEBSITE:

**[HTTPS://WWW.MERCYGIVING.ORG/
HKOP.HTML](https://www.mercygiving.org/hkop.html)**

DOUGLAS COUNTY

POPULATION: 107,0375

SIZE: 5,100 SQ MILES

RURAL POPULATION: 41 PERCENT

CHILD POVERTY RATE: 30 PERCENT

SOURCE: The Ford Family Foundation and Oregon State University Extension Service. (May 2018). Oregon by the Numbers: Key measures for Oregon and its counties.

CASE STUDY

Mercy Foundation's Healthy Kids Outreach Program

Douglas County, Oregon, is larger than the state of Connecticut. The county is culturally split between its urban center, Roseburg, and the more rural areas where most residents live. Most county services, businesses and economic opportunities are concentrated in Roseburg.

The economy of the area was dependent on the timber industry for many decades, and between one-third and one-fourth of the labor force still works in the forest products industry. Other economic drivers include manufacturing, agriculture and sheep ranching. It is politically conservative; the last Democratic presidential nominee to carry the county was Lyndon Johnson in 1964.

Douglas County is almost 90 percent white and struggles with high rates of unemployment, poverty, and poor health outcomes. Thirty percent of children in Douglas County live in poverty, a rate 10 percent higher than the state average. Food insecurity for children is also especially high—Douglas ranks 34th out of Oregon's 36 counties.

Much of Douglas County is composed of the rural communities of "South County," which is forested and sparsely populated, with about three people per square mile. Fewer than 50 percent of South County residents live in incorporated towns. Half the population has a high school education, and only 9 percent have a bachelor's degree or higher; almost a quarter of residents live at or below the poverty line.

HISTORY OF PROGRAM DEVELOPMENT

Mercy Medical Center, one of Oregon's busiest hospitals, operates with passion for prevention. Located in Roseburg, a town whose motto is "a community of service," Mercy considers itself a steward for improving health outcomes in the region, a goal strongly supported by the commitment of the Mercy Foundation and its board.

To further its commitment to health promotion, the Mercy Foundation established the Healthy Kids Outreach Program (HKOP) in 2006. The program's intention is to shift the focus in child health from intervention to prevention by providing health care and health education in a school setting.

From the beginning, the vision was to serve every student in Douglas County. HKOP began by piloting in a few schools in rural Douglas County. Health resource nurses provided health education and resources to students and helped families navigate the health care system. These health resource nurses continue to work closely with the school nurses employed by the Douglas County ESD. There is only one full-time school nurse for all of Douglas County, and the position is focused on working with medically fragile students and providing more “traditional” school nursing services. In contrast, health resource nurses can work at the school/population level, with a focus on prevention, and have greater capacity to work with more families.

During its first years, HKOP focused on building relationships with schools and communities and conducting needs assessments. Through this work, HKOP staff were able to identify gaps in prevention services. Families needed additional support around dental care, nutrition, physical education and violence prevention. Teachers, parents and students identified dental care as their top health issue, and nurses working in schools reported that students often complained about dental pain.

In response, HKOP added dental screenings and services to its offerings in 2011, and created the Dental Learning Lab, a dental education curriculum, in 2013. In response to the level of need, HKOP made dental care available to every school in Douglas County.

OVERVIEW OF IMPROVEMENT AND EXPANSION

HKOP provides dental screenings, services and oral health education to more than 4,000 students in Douglas County twice a year. In the 2017-2018 school year, HKOP served 28 schools and every school district in the county. The program continues to provide services to all grades, with a focus on elementary and middle schools.

As HKOP expanded to new schools, they offered Learning Lab first, adding dental screenings and services the following school year. This strategy has since shifted. Now, new schools receive both education and screening/ services in their initial year. Starting with education is a good way to support screenings, raise awareness of dental issues, encourage students to return consent forms and answer questions. Program staff have found that it is easier to work with schools when this is expected from the onset: education and screenings/services as two closely related efforts, and education comes first.



ADOPT A PUBLIC HEALTH APPROACH

HKOP takes a population-based approach, focusing on providing preventive services to all students and building a culture of health in the community while also addressing unmet needs for care.

“We’re taking a public health approach, and aiming for culture change, nothing less.”

HKOP STAFF



CASE STUDY:

MERCY FOUNDATION'S HEALTHY KIDS OUTREACH PROGRAM

The Learning Lab is fiscally neutral, a decision carefully made by Mercy Foundation and its board. The goal is culture change—not revenue. In support of that aim, another emerging goal is to reach parents. With momentum built in classrooms and schools, there is an opportunity to take information to others in the community in support of broader culture change. An adult version of the Learning Lab has recently been developed. The adult curriculum goes beyond oral health education and incorporates information on nutrition, physical fitness and general health, with a focus on referring individuals to relevant local resources.

In some parts of Douglas County, access to even basic dental care has been poor for generations. The issue of poor dental health was not created overnight, and Mercy recognizes that correcting course will be a generation-or generations-long effort.

Learning Lab at Sunnyslope Elementary

SCHOOL:

SUNNYSLOPE ELEMENTARY

COMMUNITY: ROSEBURG, OR

GRADES: K-5

STUDENT ENROLLMENT: 281

PERCENT FREE OR

REDUCED-PRICE LUNCH:

78 PERCENT

SOURCE: Oregon Department of Education School Report Card (2017-2018) [data file]. Retrieved from <https://www.oregon.gov/ode/schools-and-districts/reportcards/>

Sunnyslope Elementary is a Title I school in Douglas County School District 4. Students are drawn from Roseburg's lower income neighborhoods. Many students are transient, frequently moving and transferring between schools. More than three-quarters of Sunnyslope students are economically disadvantaged.

Learning Lab day starts with twenty wiggly second graders sitting in a circle. The health educator leading the group tells students to smile at the person next to them, and then asks, "Did you use your teeth for that?" Students identify the three main ways they use their teeth: for talking, chewing and of course, smiling.

The health educator asks students how often they should brush their teeth, and for how long. Several students remember the answers from last year, when they did the Learning Lab in first grade. Students make two sets of "bunny ears" with their fingers, to help remember: brush twice a day, for two minutes each time. All 20 students raise their bunny ears high.

Next, students are split into small peer groups and move through six Learning Lab stations, learning about topics such as nutrition, sugar, brushing and flossing, and what to expect from their upcoming dental screening. Each station presents opportunities to try out simple activities about dental hygiene and oral health. Students simulate applying fluoride varnish to teeth by running a dry paintbrush over laminated teeth. They stick "sugar bugs"—magnets shaped like sugary treats such as ice cream and candy—and other

“In the years that we’ve been doing this, we’ve started to see a real decline in “2s” [children with urgent dental care needs]. Kids who we started seeing in kindergarten are now in middle school. They’ve been screened and sealed and getting education consistently every year for five years. We believe that we are seeing a difference. We’ve been seeing a decline in ER visits for child dental problems.”

HKOP STAFF

foods, like water and vegetables, onto a magnetic board in the shape of a tooth. Once they shift the tooth to vertical, they can see that only the “sugar bugs” stick to teeth and need to be carefully brushed away to keep teeth clean. Other students practice brushing using monkey and dragon puppets outfitted with full sets of teeth and oversized toothbrushes. At another station, students visit a mock dental office, learning about and touching the tools the dentist uses, and seeing what it feels like to be in the dental chair.

For second-graders, today is their first introduction to sealants, which some students will receive later in the year. The health educator describes how sealants are applied, and emphasizes that it won’t hurt, something that many students are fearful about. This helps to build comfort, so students know what to expect on services day. Discussing sealants is also an opportunity to remind students (and their families) to return permission forms. HKOP sees an increase in consent form return after their Learning Labs.

At the flossing station, students learn how to hold floss using a shoelace, which they work between the pegs on a plastic Brio block, a stand-in for a row of teeth. “You should floss once a day, every day,” the station’s volunteer, a dental student from nearby Umpqua Community College, prompts the students. One little girl looks concerned at this, her eyes wide. “Every day? Even tomorrow?”



PROVIDE EDUCATION THAT IS DEVELOPMENTALLY AND CULTURALLY APPROPRIATE

HKOP’s program has health education at its core, even for its youngest participants. Health educators use developmentally-appropriate language and teach students oral hygiene skills that they can use in their own lives.



PRIORITIZE POSITIVE ORAL HEALTH CARE EXPERIENCES FOR STUDENTS

HKOP staff use educational opportunities to complement screenings and service provision, helping to build comfort and familiarity in students before they receive services.

HEALTHY, HAPPY SMILES PROGRAM

HOME ORGANIZATION:
EASTERN OREGON HEALTHY LIVING ALLIANCE (EOHLA)

BASED IN: LAKEVIEW, OR

COUNTIES SERVED:
GRANT, HARNEY, BAKER, MALHEUR

DCO: ADVANTAGE DENTAL

YEAR ESTABLISHED: 2016

FUNDING THROUGH CDHI FOR:
NEW PROGRAM

NUMBER OF SCHOOLS SERVED 2017-2018: 29

PROGRAM CONTACT:
ALANNA CHAMULAK

WEBSITE:
[HTTP://EOHLA.ORG/PROGRAMS/](http://EOHLA.ORG/PROGRAMS/)

GEOGRAPHIC REACH:
28,000 SQ MILES

“By going to where the children are, we decrease barriers to access and demonstrate that oral health is both important and a routine part of health monitoring and prevention services.”

EOHLA STAFF

CASE STUDY

Eastern Oregon Healthy Living Alliance’s Healthy, Happy Smiles Program

Southeastern Oregon is comprised of many of Oregon’s sparsely populated frontier counties: Grant, Harney, Baker and Malheur. Together, these four counties stretch 28,000 square miles, an area larger than ten U.S. states. This region includes some of Oregon’s most incredible natural wonders: the brilliantly colored Painted Hills, lava formations of the Steens Mountains and surreal white playas of the Alvord Desert. Much of the land is managed by the Forest Service or Bureau of Land Management. In Malheur and Harney counties, more than three-quarters of the land is publicly owned.³⁵

The combined population of these four counties is 60,945, meaning that the region encompasses one third of Oregon’s land mass and just 1.5% of its population. Ontario, a city along the Idaho border, is by far the largest in the region, with a population of 11,000.³⁶

The poverty rate in this part of Oregon is high; in Malheur County, 34.7 percent of children live in poverty. This goes hand in hand with high rates of food insecurity and isolation from necessary services. Still, the region boasts robust civic participation and its high school graduation rates are among Oregon’s highest. In Grant County, the high school graduation rate is over 90 percent.

Dental health in southeastern Oregon is among the poorest in the state. According to the 2012 Smile Survey, 73 percent of children ages 6-9 in southeastern Oregon have cavities (compared to 52 percent of children statewide). There is little access to acute or preventive dental care in this region, with few dentists working in many rural areas.

OVERVIEW OF PROGRAM DEVELOPMENT

The Eastern Oregon Healthy Living Alliance (EOHLA) formed in 2014 to promote health in 12 of Oregon’s central, southern and eastern counties and manage the implementation of the Eastern Oregon Coordinated Care Organization’s Regional Health Improvement Plan. One goal of the plan is to improve oral health for children up to age 10. In support of this goal, EOHLA launched its Healthy, Happy Smiles Program in partnership with Advantage Dental (the region’s DCO) and local dental providers.

Healthy, Happy Smiles is a comprehensive school-based sealant program, serving students in kindergarten through eighth grade in Grant, Harney, Baker, and Malheur counties. Most students are eligible for Medicaid, as the program focuses on schools where 40 percent or more students qualify for Free or Reduced-Price Lunch. During its first year, Healthy, Happy Smiles served 3,000 students at 25 schools. The following year, the program expanded to 4,670 students and 29 schools.

Dental screenings are provided by Expanded Practice Dental Hygienists (EPDHs) from Advantage Dental, who provide sealants, fluoride varnish, and referrals and follow-up for students who need additional care. Oral hygiene education is provided in multiple ways. EPDHs provide one-on-one chairside education, and the Healthy, Happy Smiles program coordinator leads classroom and school-wide presentations using Mercy Foundation's Learning Lab curriculum.

The Healthy, Happy Smiles program coordinator supports EPDHs' work, strengthening the public health and prevention aspects of the program and handling logistics with schools and partners. The coordinator ensures that the community understands the importance of dental health and how to access screening and sealant services, sending letters to staff and families ahead of the school year to describe the programs' purpose and structure. The coordinator also helps schools distribute and collect consents, providing incentives to teachers and students for consent form return. At the end of the school year, the coordinator sends a report to administrators to describe the services provided at their school.

Healthy, Happy Smiles continues to grow. Each year brings an increasing percentage of consent forms returned and higher participation. Schools are becoming familiar with the programs' services and staff; relationships and partnerships have been established. Many schools have begun to incorporate the program into their regular operations, taking steps like integrating consent forms into fall registration and tracking students who have not returned forms.

Healthy, Happy Smiles is also working to build awareness about dental health at the community level, using channels appropriate to Oregon's small towns. This includes marketing efforts like radio spots and ads in local newspapers to spread awareness about the program and inform families about the services available.

Healthy, Happy Smiles serves an enormous geographic area and many remote communities, which brings unique challenges. Coordination is difficult, and



BUILD TRUSTING, LONG-TERM RELATIONSHIPS WITHIN SCHOOLS

Healthy, Happy Smiles is a new program, still establishing itself as a regular presence within schools and seeing early positive results from careful relationship cultivation.

CASE STUDY:

EASTERN OREGON HEALTHY LIVING ALLIANCE'S HEALTHY, HAPPY SMILES PROGRAM

SCHOOL:

HINES MIDDLE SCHOOL

COMMUNITY: HINES, OR

GRADES: 6-8

STUDENT ENROLLMENT: 200

PERCENT FREE OR

REDUCED-PRICE LUNCH:

59 PERCENT

SOURCE: Oregon Department of Education School Report Card (2017-2018) [data file]. Retrieved from <https://www.oregon.gov/ode/schools-and-districts/reportcards/>



PROVIDE EDUCATION THAT IS DEVELOPMENTALLY AND CULTURALLY APPROPRIATE

This is a middle school audience, so the learning objectives are appropriate to this age. The importance of injury prevention is taught using examples from OSU and UO, using college athletes familiar to students.

visits involve many hours of travel on desolate highways. Many schools are in tiny towns or unincorporated communities, and school districts which have fewer than 10 students enrolled. Several school districts have a single school, including one-room schoolhouses with a single teacher. In these places, the loss or gain of one student has a major impact on the program's work. If program staff visit on a day when a family is traveling or sick, there may be no program-eligible students. Some live more than a hundred miles from the nearest dental clinic, making follow-up care all but impossible.

Learning Lab at Hines Middle School

At 10,000 square miles, Harney is Oregon's largest county. Most residents are concentrated in Burns-Hines, two towns so geographically close that the boundaries have blurred. Burns-Hines has about 4,400 residents, which represents almost 60 percent of the population of the county.

Burns-Hines is just south of the Malheur National Forest, an area that received national attention in 2016 when armed militants occupied the headquarters of the Malheur National Wildlife Refuge. The area continues to heal from the scrutiny and divisiveness sowed by the occupation and subsequent Federal trials. "It'll be a generation of work," observed one local resident more than a year after the occupation ended.

Hines was originally established as a company town for the local lumber mill. Nowadays, its economy is based on cattle ranching, agriculture and lumber. The last mill in the area closed in the 1990s.

It's fall in Hines, but the weather is already turning cold, and the town is preparing to hunker down for another long, isolated winter. Hines Middle School students are busy, and the school is packed with activity, energy and life. The Hines Middle School mascot is a Scottie dog, in tribute to the Scottish roots of many local residents. Students are proud to be Scotties, and colorful construction paper Scottie dogs seem to be pinned to every wall in the building.

Today is Learning Lab day for Healthy, Happy Smiles. Students will learn about oral health topics including tobacco, mouth safety and injury prevention, sugar and nutrition, orthodontics and dental careers. Ten students participate at each station, rotating every five to six minutes and turning in a worksheet at the end for class credit.

“There’s lots of driving and lots of work to understand each school and community culture. Any absences make it really hard to see kids.”

HEALTHY, HAPPY SMILES PROGRAM COORDINATOR

Ideally, the Learning Lab is scheduled before EPDHs visit to give students more information about what dental screenings and services they can receive, educate them about why dental care is important, and remind families to return consent forms. But while that may be the ideal order of operations, Healthy, Happy Smiles is flexible, adapting to schools’ schedules and to the limitations posed by travel and scheduling needs when covering such a large geographic area. Today, EPDHs from Advantage Dental are providing dental services to students at the same time as the Learning Lab.

Yesterday, the EPDHs screened all students with parental permission, and today students in need of further care are pulled out of class to receive sealants, fluoride and other services. Sealants are applied in the basement of the school, in a storage room with football helmets and other equipment piled high. The hygienists are cheerfully making the best of the situation, and work efficiently and diligently to see as many students as they can.

Upstairs in the gym, sixth-grade students participate in the Learning Lab. They listen attentively as volunteers present their stations. Students parse out the information needed for their worksheets, dipping their heads down to fill in the answers. They listen closely and move quietly from station to station. Things are different out here. “Kids are better behaved in a small town,” says Alanna Chamulak, program coordinator for Healthy, Happy Smiles, “because they know that there are eyes all over the school. They might even be related to the secretary or a teacher.”



ADAPT SERVICES TO MEET COMMUNITY NEEDS AND COMPLEMENT EXISTING RESOURCES

Healthy, Happy Smiles has a close relationship with its DCO, Advantage Dental, and works in concert with Advantage to provide communities with the services they need.

PROVIDENCE HEALTHY SMILES

HOME ORGANIZATION:

PROVIDENCE SEASIDE HOSPITAL

BASED IN: SEASIDE, OR

COUNTIES SERVED: CLATSOP

CCO: COLUMBIA PACIFIC

DCO: ADVANTAGE DENTAL, CAPITOL DENTAL, WILLAMETTE DENTAL, AND ODS.

YEAR ESTABLISHED: 2016

FUNDING THROUGH CDHI FOR:
NEW PROGRAM

NUMBER OF SCHOOLS
SERVED 2017-2018: 9

PROGRAM CONTACT:
JUSTIN ABBOTT

WEBSITE:

[HTTPS://
PROVIDENCEFOUNDATIONS.ORG/
OUR-FOUNDATIONS/PROVIDENCE-
SEASIDE-HOSPITAL-FOUNDATION/](https://providencefoundations.org/our-foundations/providence-seaside-hospital-foundation/)

CLATSOP COUNTY

POPULATION: 37,660

SIZE: 1,084 SQ MILES

RURAL POPULATION: 39 PERCENT

CHILD POVERTY RATE: 18 PERCENT

SOURCE: The Ford Family Foundation and Oregon State University Extension Service. (May 2018). Oregon by the Numbers: Key measures for Oregon and its counties.

CASE STUDY

Providence Seaside Hospital's Providence Healthy Smiles

Oregon's North Coast is the historic home of the Chinook, Clatsop, and Kathlamet tribes. Its modern economy was built on canning and timber, which have been replaced by the service industry and tourism over the past few decades. The coastal population more than doubles during the summer months as tourists and owners of second homes arrive for the season. Much of the housing is used as vacation homes and short-term rentals, inflating prices for homes and rentals overall. Local residents feel the squeeze.

The county is majority white, with a growing Latino population. The youngest residents are also the most diverse — 25 percent of children in the county are children of color.³⁷ In community needs assessments, residents have identified a lack of affordable housing, lack of living-wage jobs, and limited access to healthy food and transportation as top health and livability concerns.

Most residents of Clatsop County have access to fluoridated drinking water, which is unusual for Oregon. Still, there is room for improvement when it comes to dental health, especially in availability of services. Dental conditions remain the second-most-common reason why children and adults visit the emergency room at Providence Seaside Hospital, the region's largest emergency room.

OVERVIEW OF PROGRAM DEVELOPMENT

A 2013 community needs assessment of Clatsop County identified oral health as a priority area.³⁸ A subsequent 2016 needs assessment reinforced the importance of access to preventive dental care and education. This led to the creation of the Providence Healthy Smiles Program, with the goal of helping children in Clatsop County get oral health and dental services through education, coordinated care and navigation.

From the beginning, the Providence Healthy Smiles Program plan was supported by community leaders, including five school districts, community dental professionals, DCOs and CCOs, and Providence Seaside Hospital. Many had a hand in the creation of the program and remain deeply involved. Representatives from the local CCO and all four DCOs serving the county are members of the Providence Healthy Smiles steering committee, which also includes school nurses, principals and local community members.

Providence Healthy Smiles works with the Oregon Health Authority (OHA) to support OHA's sealant program in Clatsop County schools. The program provides sealants to all first- and second-grade students in the county. Hygienists schedule screening and service days with schools; the Providence Healthy Smiles program coordinator provides support through coordination, planning, organization of consent form return and handling of logistics on screening days. The program coordinator also plays an important role in educating students and families about the importance of oral health, connecting families to their DCO, and identifying a dental home.

Providence Healthy Smiles launched in the 2016-2017 school year in six schools and five districts. The following year, it expanded to nine schools. Now, the program has a presence in all five cities in Clatsop County, providing screenings, fluoride and health education to students in kindergarten through eighth grade. In these schools, 51-69 percent of students qualify for Free or Reduced-Price Lunch. These students also represent the changing demographics of the county; 15-34 percent are students of color.³⁹

Providence Healthy Smiles has found remarkable success with consent form return. Consent forms are included in student registration packets at the beginning of the school year. The program coordinator handles follow-up to ensure forms are returned. Incentives have helped motivate students and teachers. These may be small — a gift card, or entry in a raffle — but can have a big effect. In some schools, classes compete over who will have the highest rate of forms returned, and the winning class gets a pizza party.

If students do not bring forms back, the coordinator will work with their teachers, and if necessary, follow up with families directly. A whopping 78 percent of eligible students return consent forms. Return rates are highest in schools where Providence Healthy Smiles has had a longer presence, where consent returns are as high as 100 percent.

Still, most returned forms do not give permission for screening. The average rate of permission is 40 percent. But even when families decline services, participating in the consent process can help build awareness in the community about the program and services offered. This increases the visibility of the program and shows families that the program is here to stay.

When students with acute dental care needs are identified, the program coordinator immediately contacts their families. A dentist in Astoria will see students in urgent need of care immediately, and he is just a phone call and quick car ride away. Because of the network the program coordinator has

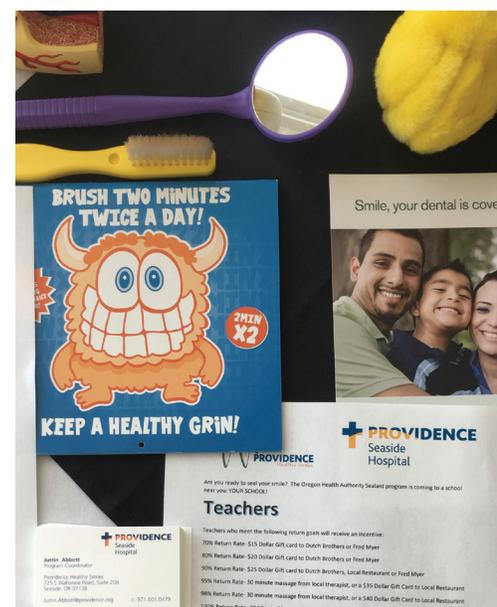
Only 35 percent of children in Clatsop County visit a dentist annually.

SOURCE: Clatsop County, Oregon 2016 Community Health Needs Assessment. (2017). Retrieved from: <https://www.psjhealth.org/community-benefit/community-health-needs-assessments>



ADAPT SERVICES TO MEET COMMUNITY NEEDS AND COMPLEMENT EXISTING RESOURCES

Healthy Smiles was created in response to specific dental health needs identified in the county, and partners were brought in during program planning to prevent duplication of efforts.



CASE STUDY:

PROVIDENCE SEASIDE HOSPITAL'S PROVIDENCE HEALTHY SMILES

COMMUNITY: WARRENTON, OR

POPULATION: 5,602

POVERTY RATE: 12.2 PERCENT

SOURCE: US Census (QuickFacts);
American Community Survey 2013-2017
(5-Year Estimates)



CONNECT WITH FAMILIES TO SUPPORT CONTINUITY OF CARE

Healthy Smiles has a system for connecting students in urgent need with the care they need, and for assisting families in finding a dental home.



ENGAGE LOCAL CHAMPIONS

Healthy Smiles has successfully partnered with other health services in the region, as well as public safety and local private businesses, to receive in-kind support and to help spread the message that oral health is an essential part of overall health.

tapped in to, one-third of students in need of acute care leave the school to get treatment within one hour of being identified. For students with additional needs that are not urgent, most families are referred to the only pediatric dentist in the area, who works more than an hour away.

Screening and services day in Warrenton

It's 10 a.m. at Lum's Auto Center in Warrenton, and there's a line out the door. But families aren't at the car dealership to shop for a new car. Instead, they are here to access dental care. For this event, Providence Healthy Smiles has partnered with Oregon Health Authority, local CCOs and DCOs, local dentists, and other community health initiatives. Together, these groups provide preventive and acute dental care and connect families with a dental home.

At the event, families learn about public health initiatives and services. Representatives from DCOs and CCOs provide health education and goodies like toothbrushes, stickers and floss. Free food and giveaways are provided, and Junior Miss Clatsop County makes an appearance. It's a fun atmosphere – something unexpected for a dental event.

All children and adults will receive necessary care today, regardless of their insurance status. Three teams provide screenings, sealants, and fluoride on the second floor of the dealership. Children with acute dental needs receive free services at a dental office across the street. Adults in need of immediate care receive services in an onsite mobile dental van, where Medical Teams International performs fillings and extractions. During the course of the day, 600 children are screened. Although the event is light hearted and fun, the number and diversity of people here attests to the level of need in this community.

CASE STUDY

Salem-Keizer School District’s Dental Health Solutions for Children

Dental Health Solutions for Children (DHSC) is a comprehensive school-based approach to supporting dental health for students in the Salem-Keizer School District (SKSD). SKSD is the second largest school district in the state of Oregon, serving over 40,000 students. The DHSC program is housed in the district’s department of student services.

Salem is the state capital and the third-largest city in Oregon. Salem sits in the lush Willamette Valley along the I-5 corridor, surrounded by largely agricultural communities and home to several small colleges and universities. After several efforts by Salem to annex Keizer, Keizer was incorporated in 1982. Notably, both Salem and Keizer have adjusted community water; since the 1980s, the community water supply has contained optimal levels of fluoride.

Many of the typical indicators of community health and education are similar in Marion County and Oregon statewide (e.g., graduation rates, educational attainment, employment rates, food insecurity).

HISTORY OF PROGRAM DEVELOPMENT

In 1999, Stand for Children, a national grassroots organization, conducted a community needs assessment and found children’s dental health to be the highest priority and opportunity for potential collective action. A dental task force was created, and strategic efforts to provide dental health education, prevention services and access to treatment were developed or enhanced.

Almost simultaneously, a student with a toothache and swelling that prevented him from concentrating in class was sent to the Richmond Elementary School office. Jessica Dusek, then Richmond Elementary’s Community School Outreach Coordinator (CSOC), connected the student with a dentist who donated treatment, extracting the boy’s tooth. The dentist reported that the student’s abscessed tooth was severe enough that if it had been untreated for another week or two, it could have cost him his life.

DENTAL HEALTH SOLUTIONS FOR CHILDREN

HOME ORGANIZATION:
SALEM-KEIZER SCHOOL DISTRICT

BASED IN: SALEM, OR

COUNTIES SERVED:
MARION, POLK

YEAR ESTABLISHED: 2000

FUNDING THROUGH CDHI FOR:
PROGRAM EXPANSION

**NUMBER OF SCHOOLS
SERVED 2017-2018:** 36

PROGRAM CONTACT:
JESSICA DUSEK

WEBSITE:
[HTTPS://SALKEIZ.K12.OR.US/
STUDENTS/DENTAL-HEALTH/](https://salkeiz.k12.or.us/students/dental-health/)



CASE STUDY:

SALEM-KEIZER SCHOOL DISTRICT'S DENTAL HEALTH SOLUTIONS FOR CHILDREN

In 2000, with the dental task force in place, and the near-fatal incident as a call to action, a group of local dentists created the Neighborhood Dentist Program, which was then incorporated into the SKSD by Stand for Children community volunteer Catherine Pederson, Richmond Elementary School principal Kathy Bebe, and Jessica Dusek. The Neighborhood Dentist Program pairs each of the district's 64 schools with a dentist who agreed to donate no more than one appointment per month to students with urgent care needs who would otherwise not have access to treatment.

Over the next several years, with support from the Dental Task Force, Stand for Children, SKSD, and local donors and foundations, the program developed into a full slate of coordinated dental health resources for students. DHSC efforts now include parent and student education, school-based screenings, school-based sealant application in coordination with Capitol Dental Care and multiple pathways of connecting families to essential dental care.



ENGAGE LOCAL CHAMPIONS

DHSC coordinators have engaged many local champions, including a committed groups of core volunteers.

One of the most remarkable aspects of the DHSC program is its intentional and extensive work to amplify the program through collaboration with local resources like the Neighborhood Dentist program, Medical Teams International's mobile clinics and several key volunteer groups. Young adults with disabilities in the Community Transitions Program contribute about 120 hours of time to assemble and distribute nearly 10,000 dental kits for the program as part of their early workforce experience. Assistance League volunteers donate a collective 300 hours supporting screenings and providing leadership for the program's steering committee. Incredibly, the program's steering committee still includes the eight members who helped launch the original program in the late 1990s.



BUILD TRUSTING, LONG-TERM RELATIONSHIPS WITHIN SCHOOLS

Being a part of the Salem-Keizer School District helps the DHSC coordinators build long-term, trusting relationships within schools.

OVERVIEW OF IMPROVEMENT AND EXPANSION

Through the Oregon Children's Dental Health Initiative, Dental Health Solutions for Children improved their process and data system and increased coordination with local partners, particularly Capitol Dental Care. DHSC also expanded its efforts to serve middle school students. During three years of funding through the Initiative, DHSC served up to 36 schools each year, conducting a total of over 20,000 screenings and placing over 6,600 sealants.

Being a school district program has many advantages for DHSC. Program staff can communicate and coordinate with school administrators easily and promote school-based dental services as part of a broader set of services provided by the district. This helps both school staff and families gain trust and comfort with the program.

Staff can also access student information systems that help streamline their efforts. For example, they are able to easily pull lists of students by classroom and access existing information about student demographics. During the Initiative, staff worked with the school district to improve data tracking systems with the hope they would be able to move toward using tablets to capture data about screenings and services provision while at schools. While they haven't yet accomplished that goal, they have some of the most comprehensive and organized data of any of the local programs in Oregon – they are able to track change over time and are committed to adapting their focus and approach when the data indicates that needs are evolving.

Capitol Dental Care began working in partnership with DHSC in 2010. Now, Capitol pays for many of the expanded practice dental hygienists who staff screening and sealant days and provides funding for DHSC coordination staff. Because of this partnership, Capitol can capture all sealant provision in their data system, logging encounters for students who are their patients and providing follow-up directly within their provider network when appropriate.

As the 2018-2019 school year and the end of grant-funding through the Initiative approached, Dental Health Solutions for Children staff worked with Capitol Dental Care to establish a more formal collaboration. They developed a memorandum of understanding that outlines shared efforts to coordinate and conduct programming, shifting some of the financial and staffing burden from the school district to Capitol, a testament to Capitol's dedication to school-based dental health programs.

Screening day at Highland Elementary

Highland Elementary is a mid-size elementary school in northeast Salem. The school is a stately, older brick building that stands in stark contrast to some of the newer, larger schools in the district.

In early 2018, DHSC coordinator Jessica and a small team of expanded practice dental hygienists and volunteers screened about 120 first and second grade students over the course of just a couple of hours. The screening day is a great example of how DHSC works in coordination and collaboration with many partners and volunteers to serve students.

During the screening, each of 17 classes of students were out of their rooms for around 10 minutes each, ushered to and from their classrooms by a parent volunteer who also helped communicate with teachers when schedule adjustments were requested.

CASE STUDY:

SALEM-KEIZER SCHOOL DISTRICT'S DENTAL HEALTH SOLUTIONS FOR CHILDREN

COMMUNITY: SALEM, OR

POPULATION: 155,000 (AND ALMOST 391,000 IN THE GREATER METROPOLITAN AREA, INCLUDING KEIZER)

DISTRICT SIZE: 65 SCHOOLS

DISTRICT ENROLLMENT: OVER 42,000 STUDENTS

SCHOOL: HIGHLAND ELEMENTARY

GRADES: K-5

STUDENT ENROLLMENT: 390

PERCENT FREE OR REDUCED-PRICE LUNCH: 95 PERCENT

ENGLISH LANGUAGE LEARNERS: 40 PERCENT

SOURCE: Department of Education School Report Card (2017-2018) [data file]. Retrieved from <https://www.oregon.gov/ode/schools-and-districts/reportcards/>



The screening was staged in Community School Outreach Coordinator Veronica's classroom, located just inside the main entrance and near the front office. Veronica helped coordinate and communicate with teachers and school staff as the schedule evolved throughout the morning.

Four Expanded Practice Dental Hygienists – two from Capitol Dental Care and two contracted by DHSC directly – conducted the screenings. During the screenings, DHSC staff and volunteers from Assistance League sat with the hygienists and students, taking notes about the results of each screening, providing additional encouragement to students and providing logistical support, waving to the parent volunteer when the hygienist was ready for the next student.

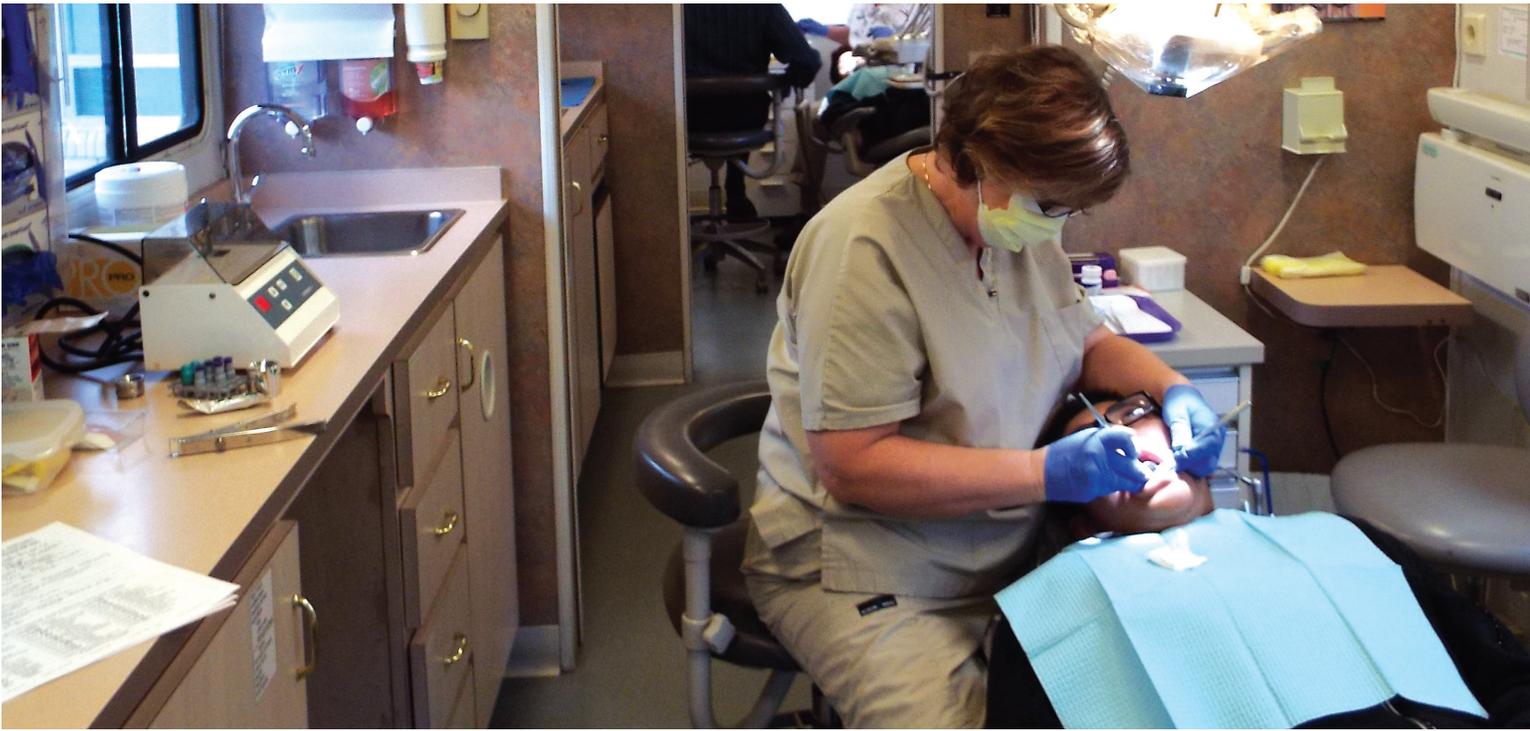
Together, this team of people help ensure students are as comfortable as possible throughout the screening process. The program coordinator and any school staff present orient groups of students to the process and step in quickly to diffuse any discomfort. Hygienists take a patient and gentle approach, taking care not to rush students who are anxious. Staff note that students can be fearful that they or their parents could get in trouble if they have tooth decay, don't have a toothbrush at home, etc.

To begin each screening, hygienists greeted students, in Spanish if that was a student's preferred language. After a brief explanation of what the screening would entail, hygienists asked students a few questions about their teeth and oral hygiene habits. The hygienist worked quickly, and gently, being as friendly as possible, reserving any obvious judgment in front of students, but letting their scribes know what to mark on forms, according to what they saw in each student's mouth and student responses to their questions about any visible cavities or suspected pain. During these brief conversations with students, the hygienists provided reminders about good oral hygiene practice, often tailored to specific students.

On more than one occasion, as student groups queued up in the classroom, they started chatting about what was about to happen. Hygienists have reported that it is obvious when students "know the drill" and have experienced screenings like this – they are calm, are not rattled by questions, and occasionally even help other students understand what is happening. When one student grew upset in line, one of the hygienists jumped up to help diffuse the situation, calming the student by describing what was going to happen and giving the student time to observe and decide whether and when to participate.

“We try to make it a point to interact with the children. We try to welcome them and help them feel at ease as they come into the room and take their seat.”

**ASSISTANCE LEAGUE
VOLUNTEER**



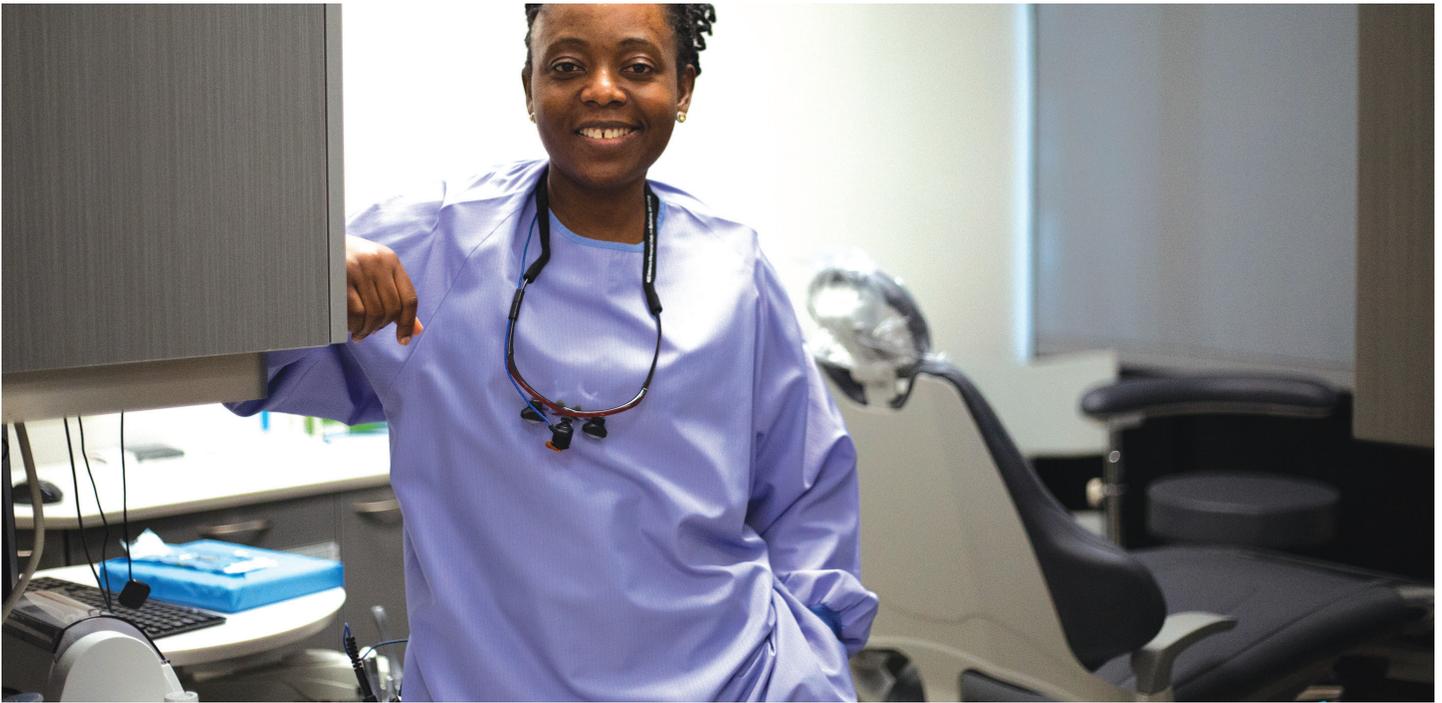
Salem-Keizer School District 24J

After dismissing each student, the hygienists conferred with their volunteer scribes to make sure that screening results and recommendations about follow-up care were correctly noted. The DHSC coordinator then helped triage the results – sorting student forms into piles based on urgency for treatment and noting any upcoming opportunities to connect to services (e.g., if a student might be a good fit for an upcoming Medical Teams International visit, or a good candidate for the Children’s Program). Whenever possible, DHSC staff completed the forms that went home to parents during this process, so that all paperwork was ready to go by the time the screenings were complete for the day.



**PRIORITIZE POSITIVE ORAL
HEALTH CARE EXPERIENCES
FOR STUDENTS**

The DHSC coordinators, hygienists and volunteers all work to address student fears and help them feel comfortable with dental care.



Virginia Garcia Memorial Foundation

Recommendations and Next Steps

One of the greatest challenges faced by school-based dental health programs is the constantly changing context in which they operate. School leaders and staff change regularly, which can make it hard to make new inroads in schools and districts or maintain existing programming and build it from year to year. Over the past couple of years, program coordinators have navigated changes in CCO and DCO relationships, certification by the OHA and staff turnover in their own programs and organizations.

There are also several changes on the horizon that will impact these programs. Most significantly, the OHA is preparing for the next round of contracting with CCOs (CCO 2.0) which will potentially further reshape the expectations and foci of the CCOs and subsequently of the DCOs and other partners. Program coordinators should participate in the development of CCO 2.0. Program coordinators can also continue to help shape regional Community Health Improvement Plans.

Changes to the CCO financial incentive metrics are anticipated in 2020. These may include elimination of the sealant metric, particularly if every CCO continues to show improvement and/or meets the benchmark. While this is a positive trend, loss of this financial incentive may draw attention away from the importance of dental health generally, and of sealants as a valuable preventive measure.

Finally, there are also several legislative concepts in development that may both support and pressure these programs to provide services going forward.

Over the course of the Initiative, most programs have seen a steady or increasing need for services in their communities. **With Initiative funding coming to an end in 2020, school-based dental health programs need continued support to maintain the level of services provided to children throughout Oregon.**

THERE ARE MANY WAYS THAT PROGRAMS CAN BE SUPPORTED:

- All stakeholders can share information with state legislators and other leaders, school administrators, teachers, and parents about the nature and value of school-based dental health programs and to build understanding of the importance of preventive services for children’s dental health.
- Local community members and members of dental or community organizations and service clubs can serve as program volunteers, provide professional or administrative support, and help programs secure funding, supplies and in-kind support.
- CCOs and DCOs not already partnering with local school-based dental health programs can reach out to OHA or local programs directly to determine how best to collaborate. Those already coordinating or collaborating with local programs can consider how they might deepen those relationships. The Initiative-funded programs provide a range of examples of what these relationships can look like, many of which are described in this report.
- State legislators and the Oregon Health Authority can consider requiring CCOs and DCOs to collaborate with and provide staffing, in-kind support or other funding for school-based dental health programs.
- In schools where school-based dental health programs are providing services, school administrators can support programs by reinforcing the importance of screening, sealants and oral health education for students, teachers and parents. Schools that do not yet have a school-based dental health program partnership can reach out to their local program to request services. Currently, most programs in Oregon concentrate on serving schools with 40 percent or greater rates of Free or Reduced-Price Lunch.

School-based dental health programs and their partners can use the principles for coordination to improve aspects of their existing programs. The principles may prompt consideration of how programs are both evidence-based and tailored to meet their community’s needs. Programs can also use the principles to communicate the value of their efforts to others, and particularly to highlight the importance of the program coordinator role within Oregon’s dental health system.

Efforts to address some of the barriers and challenges described in this report are already underway as part of the Oregon Children’s Dental Health Initiative’s other strategies. This includes efforts to incorporate oral hygiene education into existing parenting education programs and convening stakeholders to identify and advocate for potential policy or system improvements such as addressing the need for more dental professionals, resolving data and reimbursement-related challenges, and building a more integrated system of care across the lifespan.

Finally, Oregon Community Foundation is currently working on a complimentary report aiming to describe the policy and organizational landscape for this work, including a more detailed accounting of the history of these programs in Oregon. A final, comprehensive evaluation report on the Oregon Children’s Dental Health Initiative will be published in 2020.



Salem-Keizer School District 24J

The Oregon Children's Dental Health Initiative Funding Partners

MANY THANKS to the funding partners
making this Initiative and evaluation possible:

A-dec

The Collins Foundation

The Ford Family Foundation

Kaiser Permanente

Meyer Memorial Trust

Northwest Health Foundation

Providence Health and Services

MAP OF PROGRAMS

■ NEW PROGRAMS ■ EXPANDED PROGRAMS

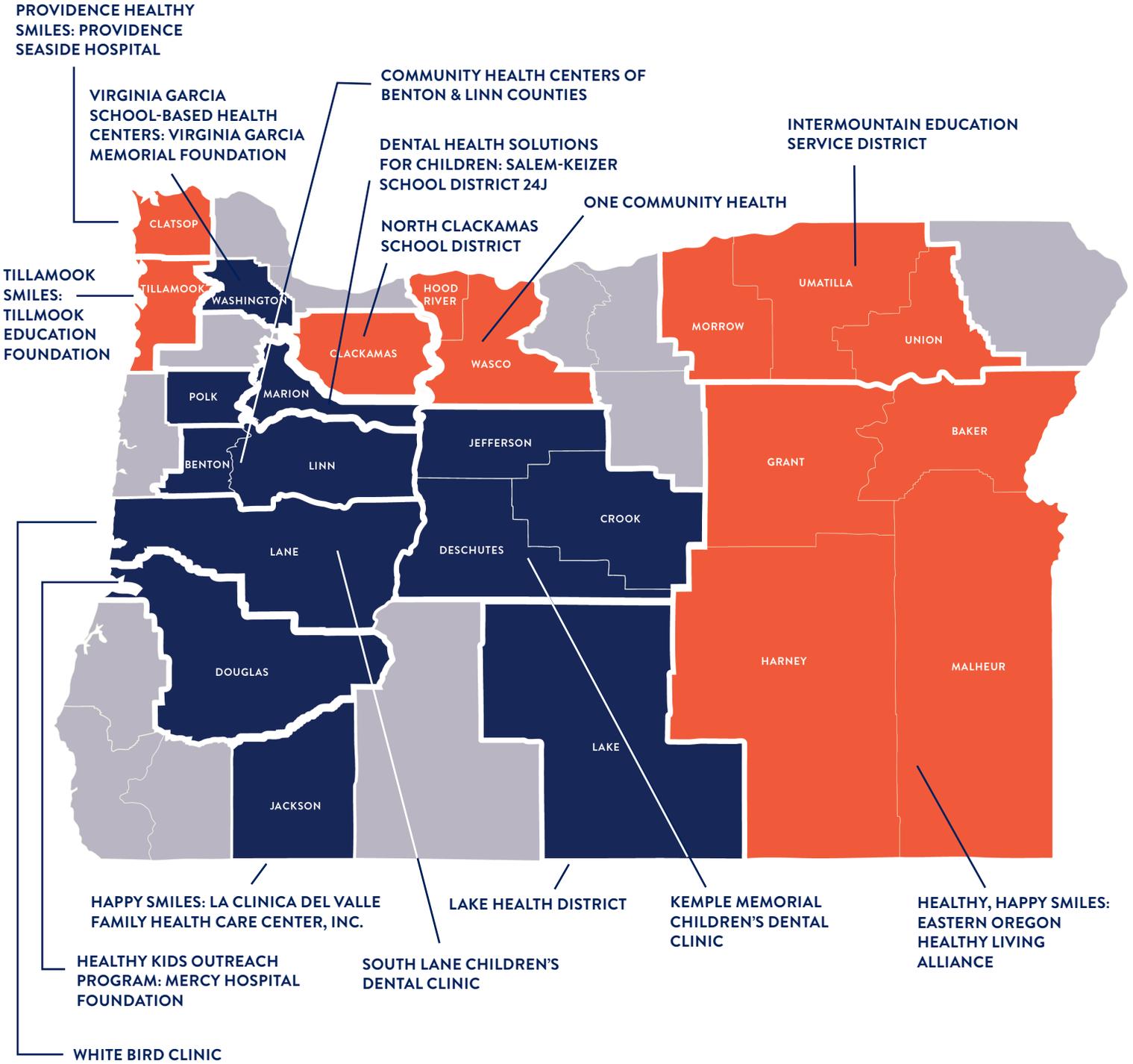


TABLE OF PROGRAMS

PROGRAM & ORGANIZATION	PROGRAM TYPE	COUNTIES	PROGRAM CONTACT	E-MAIL
COMMUNITY HEALTH CENTERS OF BENTON & LINN COUNTIES	EXPANDED	BENTON, LINN	MOLLY PERINO	MOLLY.PERINO@CO.BENTON.OR.US
INTERMOUNTAIN EDUCATION SERVICE DISTRICT	NEW	MORROW, UMATILLA, UNION	CATHY WAMSLEY	CATHYWAMSLEY@GMAIL.COM
KEMPLE MEMORIAL CHILDREN'S DENTAL CLINIC	EXPANDED	DESCHUTES, CROOK AND JEFFERSON	DEBBI SMITH	DEBBI@KEMPLECLINIC.ORG
HAPPY SMILES: LA CLINICA DEL VALLE FAMILY HEALTH CARE CENTER, INC	EXPANDED	JACKSON	EDWARD SMITH-BURNS	ESMITHBURNS@LACLINICAHEALTH.ORG
LAKE HEALTH DISTRICT	EXPANDED	LAKE	ARVINDER SINGH	ASINGH@LAKEHEALTHDISTRICT.ORG
HEALTHY KIDS OUTREACH PROGRAM: MERCY HOSPITAL FOUNDATION	EXPANDED	DOUGLAS	TRINA MCCLURE-GWALTNEY	TRINAGWALTNEY@CHIWEST.COM
NORTH CLACKAMAS SCHOOL DISTRICT	NEW	CLACKAMAS	MICHAEL RALLS	RALLSM@NCLACK.K12.OR.US
ONE COMMUNITY HEALTH	NEW	HOOD RIVER, WASCO	ELIZABETH AUGHNEY	EAUGHNEY@ONECOMMUNITYHEALTH.ORG
PROVIDENCE HEALTHY SMILES: PROVIDENCE SEASIDE HOSPITAL	NEW	CLATSOP	JUSTIN ABBOTT	JUSTIN.ABBOTT@PROVIDENCE.ORG
DENTAL HEALTH SOLUTIONS FOR CHILDREN: SALEM-KEIZER SCHOOL DISTRICT 24J	EXPANDED	MARION, POLK	JESSICA DUSEK	DUSEK_JESSICA@SALKEIZ.K12.OR.US
SOUTH LANE CHILDREN'S DENTAL CLINIC	EXPANDED	LANE	COURTNEY LONG	COURTNEY.LONG@SLANE.K12.OR.US
TILLAMOOK SMILES: TILLAMOOK EDUCATION FOUNDATION	NEW	TILLAMOOK	BRUCE RHODES	RHODESB@TILLAMOOK.K12.OR.US
VIRGINIA GARCIA SCHOOL-BASED HEALTH CENTERS: VIRGINIA GARCIA MEMORIAL FOUNDATION	EXPANDED	WASHINGTON	KYLE ALLEN	KALLEN@VGMHC.ORG
WHITE BIRD CLINIC	EXPANDED	LANE	KIM FREUEN	KIM@WHITEBIRDCLINIC.ORG
HEALTHY, HAPPY SMILES: EASTERN OREGON HEALTHY LIVING ALLIANCE	NEW	BAKER, GRANT, HARNEY, MALHEUR	ALANNA CHAMULAK	ALANNA.CHAMULAK@GOBHI.NET

GLOSSARY

Abscess: Acute or chronic localized inflammation, probably with a collection of pus, associated with tissue destruction and, frequently, swelling; usually secondary to infection.

Caries: see “cavity” (below).

Cavity: Missing tooth structure. A cavity may be due to decay, erosion or abrasion. Often used interchangeably with “caries.” The lay term is tooth decay, or simply “decay.”

Children’s Health Insurance Program (CHIP): A federal program administered through states that provides insurance to children up to age 19 with family incomes too high to qualify for Medicaid.

Coordinated Care Organization (CCO): A network of local health care providers serving individuals receiving health care coverage under the Oregon Health Plan. CCOs focus on prevention and management of chronic conditions. Oregon is served by 15 regional CCOs.

Dental Care Organization (DCO): Dental organizations providing dental care to individuals receiving dental care coverage under OHP.

Dental home: A term for an ongoing relationship between a dental provider and a patient, with the goal of providing regular, ongoing dental care to patients, reducing barriers to ongoing care, and building capacity to navigate the dental system. School-based dental health programs are not intended to replace a dental home; rather, programs work to link students to a dental home.

Dental screening: A quick assessment of a child’s dental health in which a dental professional looks in a child’s mouth and asks simple questions about hygiene practices and tooth pain or changes.

Expanded Practice Dental Hygienist (EPDH): In Oregon, dental hygienists with Expanded Practice Permits can provide care to historically underserved populations without the supervision of a dentist. These hygienists are known as EPDHs.

Fluoride: Fluoride is a mineral that rebuilds and strengthens tooth enamel, preventing and even reversing the initiation and progression of caries.

Free or Reduced-Price Lunch: Eligibility for the free or reduced-price school meal program from the United States Department of Agriculture’s National School Lunch Program has been used as a proxy for family income and for increased risk of untreated decay.

Health disparities: Differences in health status between individuals, populations or communities related to social or demographic factors such as race, gender, income or geographic region.

Health equity: Ensuring equal opportunity for health by removing barriers that prevent individuals and communities from reaching their full potential. Healthy inequity refers to the uneven distribution of social and economic resources that impact individual health.

Oregon Health Authority (OHA): Oregon state agency in charge of OHP and other health services.

Oregon Health Plan (OHP): Oregon’s Medicaid program, which provides health coverage to low-income people.

Pediatric dentist: A dental specialist who treats children from birth through adolescence, providing preventive and therapeutic oral health care.

School-based dental health programs: Programs conducted within the school setting in which teams of dental health professionals deliver screenings and services using portable equipment within a school, school-based clinic, or mobile dental van on school property.

Sealant: A physical barrier to decay. Sealants consist of a thin, plastic-like coating applied to teeth to prevent cavity formation. Application is quick and painless, and sealants last up to 10 years.

Social determinants of health: The conditions in which people live (in their homes, workplaces, schools, neighborhoods and communities). These factors affect a wide range of health risks and outcomes. Examples of social determinants of health include access to healthy foods, stability of housing, and safety of communities.

Tooth decay: Lay term for cavities (see above).

DEFINITIONS ADAPTED FROM:

American Dental Association. Glossary of Dental Clinical and Administrative Terms [webpage]. Retrieved from <https://www.ada.org/en/publications/cdt/glossary-of-dental-clinical-and-administrative-ter>.

American Public Health Association. Topics & Issues: Health Equity [webpage]. Retrieved from <https://www.apha.org/topics-and-issues/health-equity>.

ASTDD. (November 2017). Best Practice Approaches for State and Community Oral Health Programs [PDF file]. Retrieved from <https://www.astdd.org/docs/sealant-bpar-update-11-2017-final.pdf>.

Healthy People 2020. Social Determinants of Health [webpage]. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health>.

Oregon Health Authority. Oregon Health Plan terms [webpage]. Retrieved from <https://www.oregon.gov/oha/HSD/OHP/Pages/OHP-terms.aspx>.

Oregon Board of Dentistry. Scope of Practice [webpage]. Retrieved from <https://www.oregon.gov/dentistry/Pages/scope-practice.aspx>.

REFERENCES

- ¹ Otto, M. (2016). *Teeth: the story of beauty, inequality, and the struggle for oral health in America*. New York, NY: New Press.
- ² The Mayo Clinic. Cavities/tooth decay [webpage]. Retrieved from <https://www.mayoclinic.org/diseases-conditions/cavities/symptoms-causes/syc-20352892>.
- ³ Jackson, S.L., Vann, W.F., Kotch, J.B., Pahel, B.T., & Lee, J.Y. (2011). Impact of poor oral health on children's school attendance and performance. *American Journal of Public Health*, 101, 1900–6.
- ⁴ Children's Dental Health Project. (2018). Meeting children's and families' comprehensive health needs: Building two-generation models that incorporate oral health [PDF file]. Retrieved from http://s3.amazonaws.com/cdhp/Family-Centered/Fact+Sheet+-+Family+centered+efforts+percent26+OH_sm+endnotes.pdf.
- ⁵ The Pew Charitable Trusts. (2017). Financial incentives improve dental sealant rates for Oregon children [PDF file]. Retrieved from <https://www.pewtrusts.org/-/media/assets/2017/09/oregonsealant.pdf>.
- ⁶ Center for Disease Control. (2016). National Health and Nutrition Examination Survey [Data].
- ⁷ Sun, B., Chi, D. (2014). Emergency Department Visits for Non-Traumatic Dental Problems in Oregon State. Oregon Health & Science University and University of Washington.
- ⁸ Truman, B.I., Gooch, B.F. & Sulemana, I. (2002). Reviews of evidence on interventions to prevent dental caries, oral and pharyngeal cancers, and sports-related craniofacial injuries. *American Journal of Preventive Medicine*, 23, 21–54.
- ⁹ Griffin, S. et al. (2016). School-Based Dental Sealant Programs Prevent Cavities and Are Cost-Effective. *Health Affairs*, 35, 2233–2240.
- ¹⁰ PEW Charitable Trusts. (May 2017). Financial incentives improve dental sealant rates for Oregon children [PDF file]. Retrieved from <https://www.pewtrusts.org/-/media/assets/2017/09/oregonsealant.pdf>.
- ¹¹ Truman, B.I., Gooch, B.F. & Sulemana, I. (2002). Reviews of evidence on interventions to prevent dental caries, oral and pharyngeal cancers, and sports-related craniofacial injuries. *American Journal of Preventive Medicine*, 23, 21–54.
- ¹² Oregon Health Authority. School-based Oral Health Programs [webpage]. Retrieved from <https://www.oregon.gov/oha/PH/PREVENTIONWELLNESS/ORALHEALTH/SCHOOL/Pages/SchoolDentalSealantProgram.aspx>.
- ¹³ A. Umphlett, personal communication, January 18, 2019.
- ¹⁴ A. Umphlett, personal communication, January 18, 2019.
- ¹⁵ Healthy People 2020. Oral Health Objectives: Children receiving dental sealants on permanent first molar teeth (percent, 6–9 years) [data]. Retrieved from <https://www.healthypeople.gov/2020/data/Chart/5001?category=1&by=Total&fips=-1>.
- ¹⁶ Oregon Health Authority. (2013). Oregon Healthy Growth and Smile Survey: 2012 Report.
- ¹⁷ Oregon Health Authority. (2013). Oregon Healthy Growth and Smile Survey: 2012 Report.
- ¹⁸ American Dental Association & Centers for Disease Control. (2006). Fluoridation: Nature's Way to Prevent Tooth Decay [PDF file]. Retrieved from https://www.cdc.gov/fluoridation/pdf/natures_way.pdf.
- ¹⁹ US Dept of Health and Human Services. (2018). Statement on the Evidence Supporting the Safety and Effectiveness of Community Water Fluoridation [PDF file]. Retrieved from <https://www.cdc.gov/fluoridation/pdf/Scientific-Statement-on-Community-Water-Fluoridation-h.pdf>.
- ²⁰ Oregon Health Authority. Community Water Systems Adjusting Fluoride [data]. Retrieved from <https://yourwater.oregon.gov/fluoride.php>.
- ²¹ Children's Dental Health Task Force. (nd). A Path Forward for Children's Dental Health: Alternatives to Community Water Fluoridation in Multnomah County. City Club of Portland Civic Labs.
- ²² Oregon Health Authority. (March 2017). Oral Health in Oregon's CCOs: A metrics report.
- ²³ Health Policy Institute. (2015). Dentist Participation in Medicaid or CHIP. Retrieved from <https://www.oregondental.org/docs/librariesprovider42/oregon-action-for-dental-health/hpi-national-dentist-participation-in-medicaid-infographic.pdf?sfvrsn=4>.
- ²⁴ Oregon Health Authority. (March 2017). Oral Health in Oregon's CCOs: A metrics report [PDF file]. Retrieved from <https://www.oregon.gov/oha/HPA/ANALYTICS-MTX/Documents/2017-CCO-Metrics-Report.pdf>.
- ²⁵ Truman, B.I., Gooch, B.F. & Sulemana, I. (2002). Reviews of evidence on interventions to prevent dental caries, oral and pharyngeal cancers, and sports-related craniofacial injuries. *American Journal of Preventive Medicine*, 23, 21–54.
- ²⁶ Basch, C. (2011). Healthier Students are Better Learners: A Missing Link in School Reforms to Close the Achievement Gap. *Journal of School Health*, 81, 593–598.
- ²⁷ Fowler, M.G., Johnson, M.P., Atkinson, S.S. (1985). School achievement and absence in children with chronic health conditions. *Journal of Pediatrics*, 106, 683–687.
- ²⁸ Centers for Disease Control and Prevention. School Sealant Programs [webpage]. Retrieved from https://www.cdc.gov/oralhealth/dental_sealant_program/school-sealant-programs.htm.

- ²⁹ ASTDD. (November 2017). Best Practice Approaches for State and Community Oral Health Programs [PDF file]. Retrieved from <https://www.astdd.org/docs/sealant-bpar-update-11-2017-final.pdf>.
- ³⁰ ASTDD. (November 2017). Best Practice Approaches for State and Community Oral Health Programs [PDF file]. Retrieved from <https://www.astdd.org/docs/sealant-bpar-update-11-2017-final.pdf>.
- ³¹ Lawrence, H.P., et al. (2008). A 2-year community-randomized controlled trial of fluoride varnish to prevent early childhood caries in Aboriginal children. *Community Dental Oral Epidemiology*, 36, 503–516.
- ³² American Dental Association. Oral Health Topics: Fluoride – Topical and Systemic Supplements [webpage]. Retrieved from <https://www.ada.org/en/member-center/oral-health-topics/fluoride-topical-and-systemic-supplements>.
- ³³ ASTDD. (November 2017). Best Practice Approaches for State and Community Oral Health Programs [PDF file]. Retrieved from <https://www.astdd.org/docs/sealant-bpar-update-11-2017-final.pdf>.
- ³⁴ Deschutes County. (2017). Regional Health Assessment Midpoint Data Update [PDF file]. Retrieved from <https://www.deschutes.org/health/page/regional-health-assessment>
- ³⁵ The Ford Family Foundation and Oregon State University Extension Service. (May 2018). Oregon by the Numbers: Key measures for Oregon and its counties.
- ³⁶ The Ford Family Foundation and Oregon State University Extension Service. (May 2018). Oregon by the Numbers: Key measures for Oregon and its counties.
- ³⁷ The Annie E. Casey Foundation Kids Count Data Center. (2016). Retrieved from <https://datacenter.kidscount.org>. *Note: children are defined as age 19 and younger.*
- ³⁸ Stoneman, M. & McAnich, M. (2014). 2013 Community Needs Assessments & 2014-2016 Community Health Improvement Plans. Retrieved from <https://www.psjhealth.org/community-benefit/community-health-needs-assessments>
- ³⁹ Oregon Department of Education School Report Card (2016-2017) [data]. Retrieved from <https://www.oregon.gov/ode/schools-and-districts/reportcards/Pages/default.aspx>

**The mission of Oregon Community Foundation
is to improve lives for all Oregonians through the
power of philanthropy.**

OCF puts donated money to work for Oregonians - \$100 million in grants and scholarships annually. Since 1973, OCF grantmaking, research, advocacy and community-advised solutions have helped individuals, families, businesses and organizations create charitable funds to improve lives for all Oregonians.

OCF works with individuals, families, businesses and organizations to create charitable funds to support the community causes they care about.

CALL
YOUR LOCAL OCF
OFFICE

VISIT
OREGONCF.ORG

EMAIL
GIFTPLANNING@
OREGONCF.ORG

OREGONCF.ORG

PORTLAND
1221 SW YAMHILL ST.
SUITE 100
PORTLAND, OR 97205
(503) 227-6846

BEND
15 SW COLORADO AVE.
SUITE 375
BEND, OR 97702
(541) 382-1170

EUGENE
440 E BROADWAY
SUITE 160
EUGENE, OR 97401
(541) 431-7099

MEDFORD
818 W EIGHTH ST.
MEDFORD, OR 97501
(541) 773-8987

SALEM
1313 MILL ST. SE
SUITE 203
SALEM, OR 97301
(503) 779-1927